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ABSTRACT

Faculty of nursing education programs within the Georgia university system were surveyed to ascertain their opinions about the nutrition competencies that they consider essential for comprehensive nursing practice and the level of nursing education program(s) to which these competencies are best suited. The survey instrument, 56 competency statements, was divided into three sections: (1) nutrition competencies basic to nursing practice in institutions and in the community; (2) items specific to institutional nursing; and (3) items specific to community health nursing. Analysis of the data showed the predominance of respondents favor inclusion of the majority of essential nutrition competencies in both levels of nursing education over inclusion in either the baccalaureate or associate degree program. When respondents indicated a preference for a single program, the baccalaureate program was more strongly preferred for all but four competencies. These four, specific to institutional nutrition, were more strongly preferred for associate degree programs. Correlations between information on the Data Sheet for Respondents and responses on the survey instrument indicated that neither the level of program with which faculty were associated nor respondents' level of academic preparation significantly influenced their responses. (Author/JMF)

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THE COMPETENCIES IN NUTRITION ESSENTIAL FOR COMPREHENSIVE NURSING PRACTICE

By

Rebecca C. Trooboff

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A Dissertation Submitted in Partial Fulfillment of
The Requirements for the Degree of
Doctor of Philosophy

WALDEN UNIVERSITY
July 1975

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THE COMPETENCIES IN NUTRITION ESSENTIAL FOR COMPREHENSIVE NURSING PRACTICE

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Rebecca C. Trooboff

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CHAPTER I

THE STATEMENT OF THE PROBLEM

Introduction

The evolution of the science of nutrition

Food has always been essential to man's survival. Evidence exists that even though "early man" struggled to obtain food for sustenance, he soon learned that certain foods could protect against illness and cure disease.[1,2] Until the twentieth century little was known scientifically about how foods supply specific nutrients to perform vital body functions and how nutrition affects total well-being. The application of nutrition in health and disease moved from the empirical to the scientific arena during the current century. About a quarter of a century ago, Dr. Frederick J. Stare[3] said, "From birth to death, food influences man's destiny. The savagery of prehistoric man was prompted by hunger. Even in this modern day the pangs of hunger affect morai, political, and economic standards."[4] Today, this statement

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[1]Charles C. King, Foods and Nutrition (New York: Time-Life Books, 1967), p. 7.

[2]Corrine H. Robinson, Normal and Therapeutic Nutrition (New York: The MacMillan Co., 1972), p. 162.

[3]Dr. Stare is Professor and Chairman, Department of Nutrition, Harvard University, Cambridge, Massachusetts.

[4]Frederick J. Stare, "Why the Science of Nutrition?" Nutrition Reviews 8 (January 1950):1.

has ever increasing relevance to human welfare. Modern man, in our scientific era, is continually seeking new knowledge about food and its effect upon health and well-being so that not only will life be sustained and prolonged but that the quality of life will be improved.

Nutrition expanded substantially as a discrete science based on the knowledge derived from the sciences of physiology and chemistry. Information about nutrients needed daily for energy, growth and development, and for regulation of vital body processes is now encompassed in this health science. Nutrition also includes knowledge about internal body functions and external environmental factors which influence nutritional requirements in health and in illness. Further, this science deals with the way in which population groups throughout the world meet their nutritional needs.[1]

Since the turn of the twentieth century research and clinical observations have confirmed that, from conception throughout the life span, the quantity and quality of food intake influences individual human potential--physically, intellectually, and emotionally.[2]

Although the relationship of food to health was recognized and utilized since "early man," it was not until nutrition became

---

[1]Miriam E. Lowenberg et al., Food and Man (New York: John Wiley and Sons, 1968), passim.

[2]Jean Mayer, Human Nutrition, Its Physiological, Medical and Social Aspects (Springfield, Ill.: Charles C. Thomas Co., 1972), pp. 3-10 (hereafter cited as Mayer, Human Nutrition).

a science with its own knowledge base that it was formalized within nursing curricula as a specific subject matter area.

Figure 1 highlights the four historical periods in the development of the science of nutrition including the present era of greatest growth.

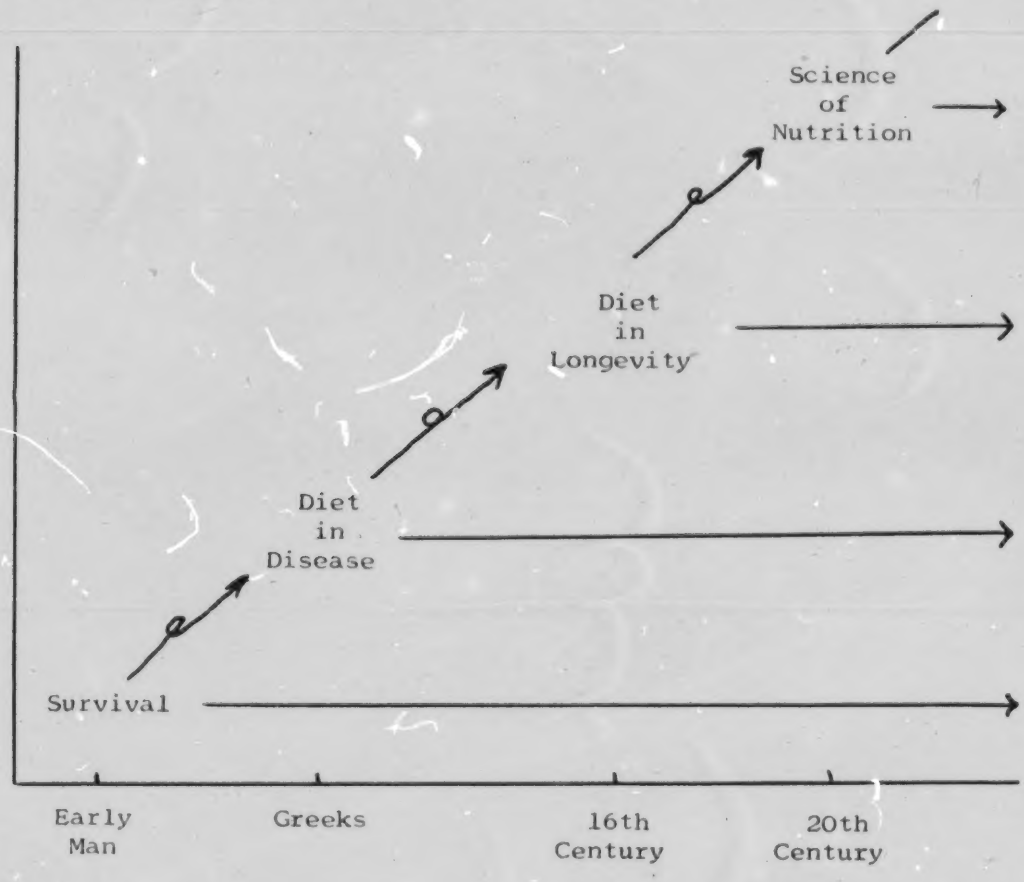

Fig. 1. Evolution of the concepts of food and nutrition through the ages.

SOURCE: The American Dietetic Association, Essays on History of Nutrition and Dietetics (Chicago: The American Dietetic Association, 1967), p. 13.

Current national emphasis on nutrition

Since 1968, four events initiated and implemented by the federal government brought human nutrition into the mainstream of major societal concerns. The first action was Senate Resolution 281, Ninetieth Congress, Second Session, which authorized the appointment of the Select Committee on Nutrition and Human Needs. Sen. George McGovern, South Dakota, has served as chairman of this body since its inception. This committee, still holding hearings in 1974 as a duly authorized body of the United States Senate, has heard testimony for over six years documenting that the nutritional status of the population is a health problem of substantial proportions and many dimensions.[1] Stimulated by the findings of this committee, a presidential order convened the First White House Conference on Food, Nutrition, and Health, December, 1969 in Washington, D.C. Dr. Jean Mayer, Professor of Nutrition, Harvard University, and an international authority on energy metabolism and other aspects of human nutrition, was appointed Special Consultant to President Nixon in charge of organizing this conference.

In making Dr. Mayer's appointment, the President of the United States said:

> In calling the White House Conference on Food, Nutrition and Health, we are affirming our commitment to a full and healthful diet for all Americans and exploring what we need to do to achieve that goal.
>
> For despite our achievement much remains to be done. All of us have been shocked as we have become aware that millions of Americans are malnourished because they are

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[1] Hearings Before the Select Committee on Nutrition and Human Needs of the United States Senate (Washington, D.C.: U.S. Government Printing Office, 1968-), passim.

> too poor to purchase the right kinds of food. We also know that many Americans have enough money to afford a healthful diet but do not have one. . . .
>
> The White House Conference on Food, Nutrition and Health is intended to focus national attention on our country's remaining--and changing--nutrition problems. It will assemble the nation's best minds and expertise from our business, labor and academic communities.[1]

Recommendations of participants in this conference were to provide the basis for actions that would put an end to malnutrition and hunger among the poor, to devise means to make better use of nutrition knowledge, and to take steps to insure a healthful diet for all Americans.

Between 1968 and 1970, a third governmental project, The Ten-State Survey, was actualized. This was the most extensive survey of its kind ever conducted in the United States. The study was carried out under the aegis of the U.S. Department of Health, Education and Welfare, Health Services and Mental Health Administration. Nutrition surveys were conducted in ten states plus New York City. The results of this survey tend to show that a significant proportion of the surveyed population had some evidence of malnutrition or was in a "high risk" category for developing nutritional problems. Other results reported were:

1. Malnutrition was related to income and nutrition was poorer as income decreased
2. Nutritional status was affected by social, cultural and geographic differences
3. Adolescents between the ages of 10 and 16 showed the highest prevalence of unsatisfactory nutritional status based on criteria used by the survey team

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[1] White House Conference on Food, Nutrition and Health, Final Report (Washington, D.C.: U.S. Government Printing Office, 1970), p. 5.

4. Many persons made poor food choices unrelated to income[1]

In 1971, the White House Conference on Aging was the fourth federal action with strong nutritional implications. Nutrition of the aging was investigated as one of the fourteen subject matter areas at this meeting. The preamble to the Nutrition Section Report states:

> We take it for granted that all older Americans should be provided with the means to insure that they, too, can enjoy life, liberty and the pursuit of happiness. Adequate nutrition is obviously basic to the enjoyment of these rights.[2]

Participants in the Nutrition Section identified inadequate and improper nutrition as a priority health problem among elderly citizens.[3] They recommended that more efficient use be made of existing nutrition programs and that more nutrition-related programs be established, where needed, by federal, state and local governments.

These four national programs between 1969 and 1974 brought to the attention of government leaders, industrialists, educators, research scientists, health practitioners, and the general public that serious health problems result not only from insufficient food but also because of lack of nutrition education. Current nutrition-related problems of high priority are maternal and

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[1] Highlights, Ten-State Nutrition Survey, 1968-1970 (Washington, D.C.: U.S. Department of Health, Education and Welfare, 1972), pp. 1-12.

[2] Section Recommendations on Nutrition, 1971 White House Conference on Aging (Washington, D.C.: U.S. Government Printing Office, 1972), p. 1.

[3] Ibid., passim.

infant morbidity and mortality, child nutrition, hunger, deficiency diseases, the alarming increase in obesity, the rising disability and death rate from cardiovascular disease and the prevalence of poor dental health. Voluminous documentation was presented by health professionals, nutrition research scientists, and educators that validates the need for improved dietary intake, better nutritional care, and more extensive nutrition education for all segments of the population. These four government events were replete with challenges to health practitioners to use their specialized expertise in an effort to improve the nutritional status of all consumers of health-care services.

Nutrition in nursing--an historical perspective

Lenna Cooper,[1] co-founder of the American Dietetic Association, credited Florence Nightingale (1820-1910),[2] with bringing nutrition into the mainstream of nursing practice and nursing education.[3] Cooper pointed out that in Florence Nightingale's book, Notes on Hospitals, published in 1859, she emphasized:

---

[1]During World War I, Lenna F. Cooper was assigned to the Office of the Surgeon General of the U.S. Army and was the first to direct the work of dietitians in war service. In 1937-38 she served as President of the American Dietetic Association.

[2]Florence Nightingale was officially appointed in 1854 to the English Army by the Secretary of War of England. In this capacity she distinguished herself as an English nurse, author, hospital reformer, and humanitarian.

[3]Lenna F. Cooper, "Florence Nightingale's Contribution to Dietetics," in Essays on History of Nutrition and Dietetics, comp. Adelia M. Beeuwkes and Emma M. Wigley (Chicago: The American Dietetic Association, 1967), pp. 5-10 (hereafter cited as Cooper, "Florence Nightingale's Contribution to Dietetics").

"1. The necessity for a variety of food is an essential element in health, owing to the number of materials required to restore and preserve the human frame . . .

"2. The importance of cooking so as to secure the greatest digestibility and economy of nutritive value in food . . ."[1]

Because, at that time, nurses carried the responsibility for food purchasing and food preparation for the sick, Florence Nightingale's concern about food variety and cooking methods was an essential part of the nurse's role in hospitals.[2] Specific to bedside care of the patient, this same English nurse commented:

> Incomparably the most important office of the nurse after she has taken care of the patient's air, is to take care to observe the effect of his food and report it to the medical attendant.

Florence Nightingale cautioned, "You cannot be too careful as to the quality of the sick diet."[3]

Over a hundred years ago, Dr. F. W. Pavy, a Fellow of the Royal College of Physicians, London, England, emphasized in his medical and nursing lectures that the correct feeding of the well and the sick should be of "deep concern to all in health care." He remarked, "Ill management of food kills off the weak and ruins the middling." Dr. Pavy's thoughts on nutrition were gathered together into a Treatise on Food and Dietetics published in Philadelphia in 1874.[4]

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[1]Ibid., p. 9. As cited from Notes on Hospitals (London: John W. Parkerand Sons, 1859).

[2]Cooper, "Florence Nightingale's Contribution to Dietetics," pp. 5-10.

[3]Ibid., p. 8.

[4]Ibid., p. 10.

A century later, in 1969, De Chow speaking to a group of nursing educators stated that registered nurses should be expected to "utilize common knowledge and standardized actions to maintain nutritional and fluid and electrolyte balance."[1] In 1971, the Secretary of Health, Education and Welfare in a report on nursing transmitted to the President of the United States included the following:

> Many elements of nursing care are, of course, common to primary, acute and long term care. Among these are: maintaining and restoring life functions--respiration, elimination, nutrition. . . .

and

> The present role of nurses covers the span from simple tasks to the most professional techniques in life threatening situations. It embraces teaching people about themselves and how to maintain and promote health.[2]

The foregoing statements confirm the generally held belief among health professionals and government officials that nutrition is an important contributing factor in programs of preventive health care and therapy. Therefore, teaching the essentials of adequate nutrition and providing nutritional care to the well and the sick are accepted activities within the scope of comprehensive nursing practice.

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[1]Georgeen H. De Chow, "A Frame of Reference," Paper from Proceedings of a Workshop, Toward a Rationale for Selecting Content for Associate Degree Nursing Programs (Memphis, Tenn.: n.p., July 7-11, 1969), p. 13.

[2]Extending the Scope of Nursing Practice, A Report of the Secretary's Committee to Study Extended Roles for Nurses (Washington, D.C.: Department of Health, Education and Welfare, 1971), p. 5 (hereafter cited as Extending the Scope of Nursing Practice).

The dietitian in nursing education

About 1890 a movement began in a few eastern hospitals in the United States to train and employ a woman knowledgeable in food preparation and food values to preside over a "special diet kitchen." Her first duty was to teach nursing students how to prepare foods for the sick and thus aid in a quicker and more complete recovery for hospitalized patients. Adelaide Nutting, Superintendent of Nursing, Johns Hopkins Hospital, Baltimore, Maryland, addressed a group of domestic science teachers at their third annual conference, 1902, and discussed the "contribution household economics was making in the education of nurses." About five years later, the forerunner of the American Home Economics Association included on its annual meeting program, "The Dietitian, Need of, and Training." Beginning in 1903 graduates of Schools of Home Economics were offered a three-months course of practical training in hospital dietetics in the City Hospitals of New York, Department of Charities.[1]

In addition to the hospital dietitian, some diploma schools of nursing with large enrollment, usually located in urban communities, employed a "teaching dietitian" as a part or full-time faculty member. Beginning about 1905, the responsibility for nutrition instruction of nursing students, theoretically and clinically, was shared by nursing faculty, the hospital dietitian, a teaching dietitian, physicians, staff nurses and supervisory nursing personnel. Each nursing program met its needs for

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[1]Colonel Mary Lipscomb, "Early Days of Hospital Dietetics," Journal of American Dietetic Association 49 (August 1966):103-9.

teaching nutrition to nursing students according to availability of clinical resources and professional personnel. Currently, registered dietitians and nutritionists, when available, function along with nursing faculty to teach nutrition in educational institutions, in hospitals, in health care facilities, in physicians' and dentists' offices, in community health agencies, and in the home.

Registered nurses in Georgia

Nurses are the largest single group of practitioners in any health discipline. The number of active professional nurses in Georgia has increased from 9,360 in 1969 to 13,285 in March, 1973. This represented an average increase of about one thousand nurses per year. The increase as shown on Figure 2 was due largely to graduates from nursing programs within the University System of Georgia. The fields of employment of Georgia's registered nurses are presented on Table 1. Hospitals were the largest single employer with 61.5% of all nurses reporting hospitals as their work setting. When the 4.5% employed in nursing homes was added, approximately two-thirds of all nurses functioned in health care institutions. The remaining one-third, about 3,500 nurses in 1972, practiced in public health agencies, schools, industry, health professionals' offices, and in schools of nursing education. From this information, it was obvious that nurses interacted with people of all socioeconomic and cultural groups; individuals on a continuum from wellness to terminal illness, and persons in all stages of the life cycle from the prenatal period through senescence.

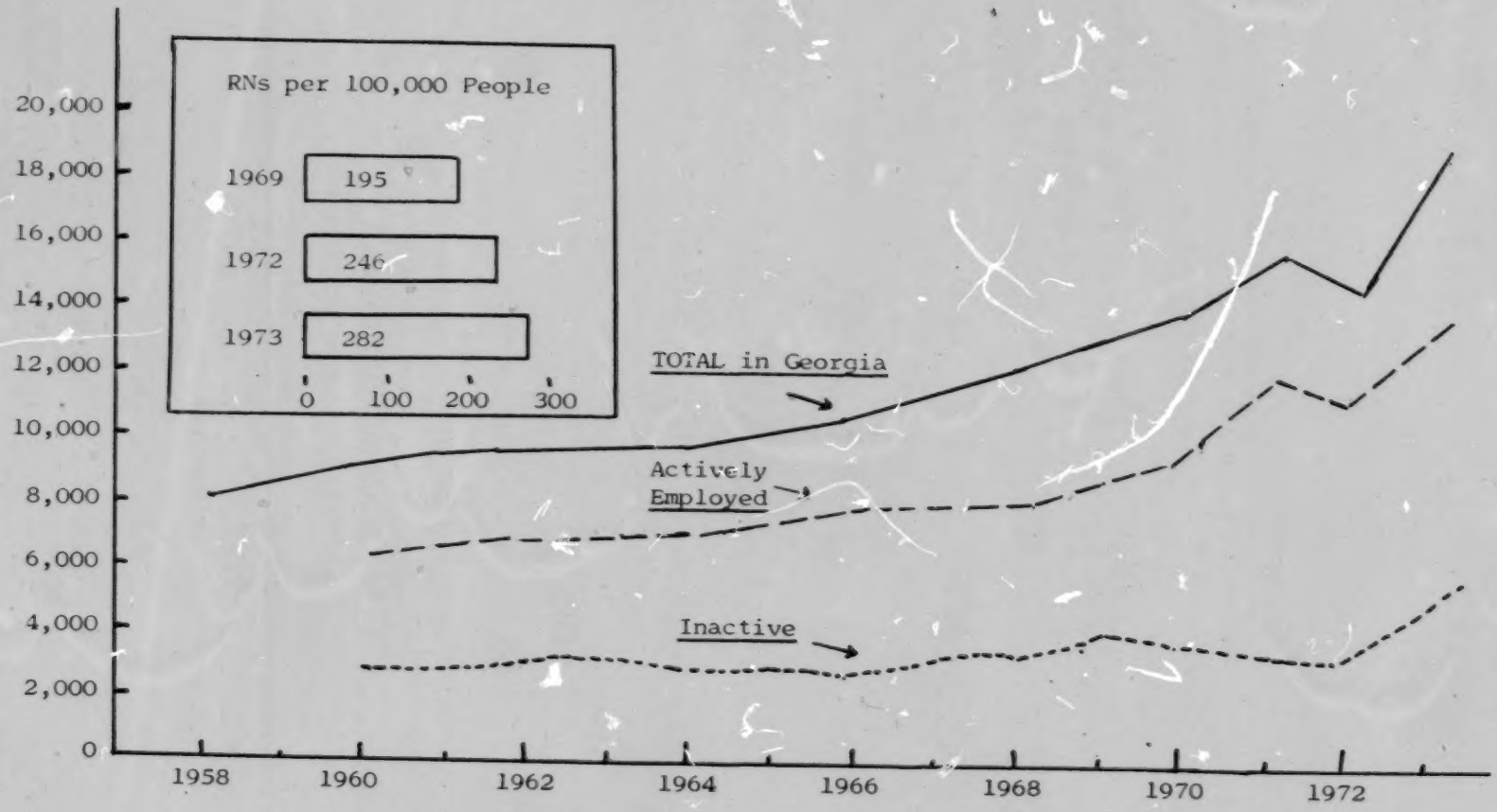

Fig. 2. Registered nurses residing in Georgia (1958 to date)

SOURCE: Report to the Study of Committee on Nursing Education of the Board of Regents of the University System of Georgia from Statewide Master Planning Committee, October 18, 1973.

TABLE 1

REGISTERED NURSES IN GEORGIA
BY FIELD OF EMPLOYMENT

Field of Employment	No.	Percent
1. Hospital	7,116	61.5
2. Nursing Home	556	4.8
3. School of Nursing	432	3.7
4. Private Duty	720	6.2
5. Public Health (except 6)	940	8.1
6. School Nurse	185	1.6
7. Industrial Nurse	317	2.7
8. Office Nurse (Physician or Dentist)	776	6.7
9. Other	537	4.7
Total	11,579	100.0
Not Employed	3,914	

SOURCE: Georgia Validation of Certificate to Practice Professional Nursing, 1972. Compiled by ANA, Georgia Board of Regents and Georgia Comprehensive Health Planning.

By virtue of their numbers and their broad exposure to the consuming public, nurses have an unparalleled opportunity to offer nutritional care and nutrition education in health care institutions, in homes, in schools, in health professionals' offices, in industry, and in all other places where people work and reside.

Nutrition in nursing education in Georgia

A study of nursing education in Georgia said:

> Traditionally, registered nurses have taken their basic studies in diploma schools. The diploma schools, administered by hospitals, offered a three year course in nursing which places considerable emphasis on clinical experience.[1]

Graduates of diploma programs become registered nurses upon passing the State Board Licensure Examinations. During the first six decades of this century, hospital-based diploma programs prepared practically all registered nurses in Georgia. The first baccalaureate nursing program within the University System was started in 1945 and is now the School of Nursing, Medical College of Georgia. In 1966, enabling legislation was passed permitting the Board of Regents to establish two-year nursing programs and allowing graduates of these programs to write the Licensure Examinations and become registered nurses. In 1969 there were twelve colleges within the University System offering the Associate Degree in Nursing.[2] By 1973, there were twenty-two associate degree programs and the number of nursing students had more than

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[1]Pat Malone, Nursing Education in Georgia (Atlanta: Georgia Educational Improvement Council, 1969), p. 29.

[2]Ibid., p. 35.

doubled. During this same time span, the number of baccalaureate programs increased from two to four.

When the setting for nursing education programs in Georgia was changed from hospitals to college campuses, hospital and teaching dietitians remained in the diploma, hospital-based programs. Classroom teaching of nutrition theory and diet therapy clinical experiences which had been a regular part of nursing programs became, for the most part, a thing of the past. Formal courses in nutrition and diet therapy were either shortened or the nutrition subject matter was dispersed throughout nursing courses. Because clinical contacts with patients were diminished, students had less opportunity to interact with hospitalized patients in terms of dietary services, nutritional bedside care, and nutrition instruction. These changes caused serious concern among nursing educators as to how students could be expected to develop the attitudes, knowledge, and skills in nutrition which were formerly (1905-1950) an inherent part of nursing education.

Only two nursing programs within the University System of Georgia employed a nutritionist as a full-time faculty member who assumed responsibility for the nutrition component of the curriculum. A few colleges offered a course in nutrition taught by home economics faculty or a teacher recruited from the community with a college degre in foods and nutrition. For the most part, the responsibility for teaching nutrition theory and selecting and supervising nutrition clinical experiences as part of nursing education was assumed by nursing faculty.[1]

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[1]Source: Final Report, Special Training Grant, Integration

In the years between 1966 and 1974 during which many nursing programs in Georgia were established on college campuses, the effective teaching of nutrition to nursing students continued as an unresolved problem.

Nutrition achievement of nursing graduates

A four-year study, "Achievement of Candidates on the Nutrition Component of State Board Examinations, 1970-1973," was undertaken to assess nutrition competence of nursing graduates writing Licensure Examinations for the first time. Data from this study were used to ascertain whether students were prepared with essential knowledge and clinical skills in nutrition as part of nursing education in seventeen selected programs within the University System of Georgia. Fourteen associate degree and three baccalaureate programs participated in the study. Performance on the nutrition test items of State Boards by candidates from participating programs was reported.[1]

Table 2 presents the performance of candidates on the nutrition test items in 1973, the final year of the study. Of the total number of 478 candidates, 53% (254) would have scored below 50% if a nutrition score was extracted as a separate evaluative measure of achievement in this specific subject matter area. The range of scores for candidates from each school on the forty-three

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of Nutrition Education into the Nursing Curriculum, NIH, #DIO-NU-00304, 1969-1974, passim. (Mimeographed.)

[1]Rebecca C. Trooboff, "Achievement of Candidates on the Nutrition Test Items, State Board Test Pool, 1970-1973," Atlanta Center, School of Nursing, Medical College of Georgia, Atlanta, Georgia (hereafter cited as Trooboff, "Achievement of Candidates").

TABLE 2

PERFORMANCE OF CANDIDATES ON 43 NUTRITION TEST ITEMS, STATE BOARD TEST POOL EXAMINATIONS (JULY-AUGUST, 1973)

Schools	Number of Candidates	Candidates Scoring Less Than 50% on Nutrition Test Items		43 Nutrition Test Items
		Number	Percent	Range of Scores[a]
A[b]	28	22	79	3-35
B[c]	14	8	57	10-34
C[b]	21	13	59	3-34
D[b]	27	9	33	9-32
E[b]	35	14	40	11-35
F[b]	60	25	42	7-35
G[c]	3	3	100	9-17
H[b]	44	24	55	9-[illegible]
I[b]	30	19	63	6-21
J[b]	14	7	50	10-39
K[b]	33	17	51	16-35
L[b]	15	7	47	19-36
M[b]	36	24	66	0-35
N[b]	51	30	49	6-34
O[b]	29	14	48	4-35
P[b]	17	12	41	14-36
Q[c]	11	6	55	10-36
Total	478	254		

[a]Where maximum possible score is 43.

[b]Associate Degree Programs.

[c]Baccalaureate Programs.

nutrition test items is also shown on Table 2.

The findings of this special study created serious concern among faculty about their candidates' achievement on the nutrition component of the Licensure Examinations. They recognized that concerted efforts were needed to strengthen the teaching of nutrition information concepts and practices to correlate with nursing practice.

As an outcome of this study, directors and faculty of the participating nursing education programs aggressively sought a more innovative and effective means of planning and implementing the nutrition component of their respective curricula.[1] Faculty expressed interest in developing students with increased nutrition competence that would not only be reflected on legal examinations but would, in fact, equip graduates with essential competence for comprehensive nursing practice.

Rationale for nutrition competencies in nursing curricula

Competencies are the "abilities, knowledge and attitudes thought to be needed by or characteristics of persons holding the positions or doing the work towards which the educational experience is directed."[2] Competencies are an outgrowth of behavioral objectives which is the cornerstone upon which the concept of competencies rests. Behavioral objectives experienced a major

[1]Source: Consultative visits with faculty of seventeen nursing programs within the University System of Georgia, January-March, 1973.

[2]Albert A. Canfield, ed., Competencies for Allied Health Instructors (Gainesville, Fla.: University of Florida, Center for Allied Health Personnel, 1972), p. 1.

thrust in educational programs in 1956 when Bloom published a classification of educational objectives titled The Taxonomy of Educational Objectives.[1] Three major areas of objectives were planned by Bloom for inclusion in the taxonomy--the cognitive, the affective, and the psycho-motor domains. The cognitive domain deals with knowledge, intellectual abilities, and skills. The second part of the taxonomy, the affective domain, includes objectives which are concerned with interests, attitudes, and values. The third domain was to have encompassed the manipulative or motor-skill area. Almost twenty years later, this third part of the taxonomy has not yet been published.

Competency statements are more general than specific behavioral learning objectives. However, competencies are more specific than broad, general goals that characterize the overall results of a total educational program.

Competencies which characterize any particular occupation can be derived in several ways such as:

1. Job observation--the identification of specific behaviors in which the incumbent engages
2. Worker interrogation--interview of practitioners engaged in the field for which competencies are being identified
3. Expert opinion--interviews with persons knowledgeable in the field and review of the literature to identify the attitudes, knowledge, and skills that are considered essential in a specific occupation[2]

Each of the three methods of determining competencies mentioned above suffers from a notable deficiency. In the "observer

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[1]Benjamin M. Bloom, ed., Taxonomy of Educational Objectives (New York: David McKay Co., Inc., 1956), p. 1.

[2]Canfield, Competencies for Allied Health Instructors, p. 3.

method," the person who is watching may not be aware of certain cognitive and affective skills of the worker that influence observable behavior and actions. Using the second method, worker interrogation, the worker may find it difficult, if not impossible, to recount all the information and skills accumulated over time which may or may not be used in the course of everyday activity. In the third method, "experts" may not always be aware of actual job requirements, behaviors, or special circumstances which affect job requirements and performance.[1] One advantage in using the "expert method" for identifying competencies as a basis for curriculum planning in nursing is that nursing educators are qualified and experienced, almost without exception, as nurse practitioners. In this respect, the nursing educator is able to respond as a practitioner as well as an academician in the field of nursing.

Until 1971, nursing education in Georgia was based on a recommended curriculum furnished by the State Board of Nurse Examiners.[2] Included in this curriculum were specific courses with minimum clock hours suggested for each course. Guidelines were provided to each school which required that each subject was to have a course outline and objectives, and that each program should be able to identify the characteristics of its graduates in terms of qualifications for nursing practice. Graduation from a program licensed by the State of Georgia and passing of State Board

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[1] Ibid.

[2] Source: Interview with Ms. Genevieve Jones, Executive Director, State Board of Nurse Examiners (Georgia), March, 1974.

Examinations served as evidence of students' achievement of the diverse programs' objectives. Since 1971, adherence to these structured recommendations has been relaxed and each program has considerable flexibility in developing its curriculum.

In the curriculum recommendations prior to 1971, forty-five clock hours were recommended for theory in nutrition and cookery and twenty-eight days were to be spent in clinical experience with patients for the students' diet therapy experience.[1] To test achievement in nutrition, the Nurse Licensure Examinations included nutrition test items dispersed throughout each of the following five tests: Medical Nursing, Surgical Nursing, Obstetrical Nursing, Nursing of Children, and Psychiatric Nursing.

Since 1971, the State Board of Nurse Examiners has not offered precise recommendations for nutrition and diet therapy in nursing curricula. Each program was permitted to include the nutrition content and related clinical experiences according to its own philosophy, conceptual framework, and curriculum design. About this same time, from 1970 to 1973, the State Board Licensure Examinations included an average of about 10% nutrition test items throughout the five nursing tests.[2] This information would seem to indicate that despite a lack of specified courses and suggested minimum hours in nutrition, graduates of these programs were expected to prove their competence in nutrition and diet therapy on legal examinations. Faculty continued to look for a practical

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[1] Ibid.

[2] Trooboff, "Achievement of Candidates."

means of integrating nutrition subject matter and experiences into nursing curricula.

In 1972, Wilson addressed herself to the use of competencies as a potential basis for curricula in health occupation educational programs when she said:

> . . . any accountable educational program in any health field is built upon the goal of preparing competent practitioners. This requires clear identification of the role the practitioner will occupy, and the competencies and level of competencies that the graduate will need to enter the field.[1]

Sister Moore focused her remarks specifically on nursing education in these comments:

> . . . The faculty of any nurse program or health specialty should analyze their specialty as it is as well as how it ought to be, not only to determine the basic tasks to be performed by those students who complete the program but also to identify the essential and unique service that they perform as distinguished from those performed by other kinds of health workers. When this unique service is clearly stated, then the faculty has identified the life giving, central core of the field and can proceed to name the competence which the student must achieve.[2]

A variety of expressions has been used by nursing educators and nursing practitioners to describe the competence needed by nurses for making nutrition an integral part of nursing education and nursing practice since nutrition was first formalized within nursing curricula about seventy years ago. Some of these expressions that regularly appeared in the literature, in course outlines, in books and in everyday use by nurses and other health personnel

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[1]Margaret A. Wilson, "Undergraduate Education in Dietetics," Journal of Nutrition Education 4 (Winter 1972 Supplement):32.

[2]Sister Anne Joachim Moore, "The Ladder and the Lattice," Nursing Outlook 20 (May 1972):330-32.

were: behavioral objectives, performance-based education, expected outcomes, characteristics, skills, abilities, educational goals, knowledge, understandings, and appreciations. The use of a competency-based approach is an effort to synthesize all of these expressions and related ideas into one commonly held concept. The goal would be to facilitate students' learning and assist faculty with managing the instructional process for increased teaching effectiveness.

The use of competencies as a basis for curriculum development is now primarily at the level of teacher education. In the field of health occupations, a study to identify competencies needed by instructors of allied health was conducted in 1972 at the University of Florida.[1] Gale and McCleary developed a model for use in developing a competency-based curriculum in college teaching.[2] McCleary and McIntyre studied the concept of competence in professional education. It was their conclusion that not only must the professional role be defined but also the knowledge, abilities and characteristics needed by the professional to carry out the defined role.[3]

The use of competencies as a basis for curriculum planning to expand upon behavioral objectives towards improvement in the teaching-learning process is in an early developmental stage. It

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[1]Canfield, Competencies for Allied Health Instructors.

[2]Larry Gale and Lloyd E. McCleary, "Competency Development and the Methodology of College Teaching--A Model and Proposal," 1971, Eric Abstract ED 077-138.

[3]Lloyd E. McCleary and Kenneth McIntyre, "Competency Based Educational Administration and Its Application to Other Fields," 1973, Eric Abstract ED 077-136.

might be projected that when teachers acknowledge that this methodology could facilitate learning activities that application of competency-based instruction at the level of the student may gain additional impetus.

The specific problem

For the past decade nursing educators in Georgia have identified that there continues to be a notable lack of sound rationale, adequate curriculum content, and suitable methodology for effectively teaching nutrition to nursing students. Nursing faculty universally agree that during academic preparation for nursing practice, students should develop positive attitudes and acquire essential knowledge and clinical skills in nutrition as an integral part of nursing in preventive health care and therapy. Carefully selected learning experiences based on stated objectives and outcomes are imperative if nursing graduates are to be equipped with the competencies for making nutrition a contributory part of total health care.

At the present time there is no generally acceptable frame of reference for the nutrition component of nursing curricula. Faculty do not know the competencies that students can reasonably be expected to achieve within the constraints of time, faculty expertise, and other variables unique to each program. A competency-based method of curriculum development might strengthen teaching-learning experiences and lend integrity to the educational programs in which students are prepared for careers in nursing.

The problem to be probed in this research study was the identification of those competencies that nursing educators

considered essential for comprehensive nursing practice. A further question that the study sought to answer is whether there are differences in the competencies deemed essential for the two-year and four-year levels of academic preparation.

Objectives of the Study

The objectives of this research study were:

1. To identify the competencies in nutrition that nursing educators consider essential for comprehensive nursing practice
2. To determine the level of nursing education (associate degree, baccalaureate, or both levels) at which these competencies should be developed

As a corollary, the study attempted to answer such questions as:

1. Does the level of academic preparation of faculty influence their selection of competencies? That is, do faculty members prepared at the master's level and above select different competencies than faculty members prepared at the baccalaureate level or below?
2. Does the type of program in which faculty teach (associate degree or baccalaureate) make a difference in their selection of competencies?

The research data from this study was used to test the following null hypotheses:

1. There is no significant difference in the nutrition competencies selected for the associate degree and baccalaureate levels of nursing education.
2. There is no significant difference in the competencies selected by faculty teaching in associate degree programs and faculty teaching in baccalaureate programs.
3. There is no significant difference in competencies selected by faculty prepared at the master's level and above and faculty prepared at the baccalaureate level or below.

Definitions and Terminology

In the context of this paper, it should be explicit as to what is meant by certain common use words. These words mean different things to different people, even health professionals. In this study, the following definitions and explanation of words and phrases apply to the matter under consideration:

Competence: A synthesis of attitudes, knowledge, and skills which equip a practitioner to perform tasks (cognitive and psycho-motor) and assume responsibilities at a level commensurate with stipulated performance standards.

Competency Statements: "Descriptions of abilities, knowledge, and attitudes thought to be needed by or characteristics of persons holding the positions or doing the work towards which the educational experience is directed."[1]

Comprehensive Nursing Practice: Preventive, therapeutic, and rehabilitative nursing carried out to optimally meet individuals' health needs within the constraints of existing health status and related environmental influences.

Dietitian: "A specialist educated for a profession responsible for the nutritional care of individuals and groups."[2]

Health: "A state of complete physical, mental and social well being and not merely absence of disease."[3]

Healthy Individual: "One who is experiencing physical, mental and social well-being and is capable of satisfying his basic needs to a sufficient degree."[4]

Illness: "A state in which there are basic threats to one or more of the basic needs, producing consequences that are beyond the

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[1]Canfield, Competencies for Allied Health Instructors, p. 1.

[2]"Goals for the Lifetime Education of the Dietitian," Position Paper, Journal of American Dietetic Association 54 (February 1969):92.

[3]Ibid.

[4]Carole J. Peterson, Ruby C. Haas, and Mary A. Killalea, "Theoretical Framework for an Associate Degree Curriculum," Nursing Outlook 22 (May 1974):321-24.

individual's ability to adapt" without nursing intervention.[1]

Integration (educational): An instructional approach that identifies those responses, attitudes, concepts, ideas, and manipulatory skills to be achieved by the student and then designs a program that enables the student to direct his activity to attaining the educational objective and/or acquire the designated behavior or skill.[2]

Nutrition: "The science of food, the nutrients, and other substances therein, their action, interaction, and the balance in relation to health and disease and the processes by which the organism ingests, digests, absorbs, transports, utilizes and excretes food substances. In addition, nutrition must be concerned with certain social, economic and social implications of foods and eating."[3]

Nutritional Care: "The application of the science and art of nutrition in helping people to select and obtain foods for the primary purpose of nourishing their bodies in health and disease throughout all stages of the life cycle."[4]

Nutritional Needs: "The physical requirements for adequate nutrients to meet bodily needs at any time for maintenance, prevention or therapy."[5]

Nursing: "The unique function of the nurse is to assist the individual, sick or well, in the performance of those activities contributing to health or its recovery (or to a peaceful death) that he would perform unaided if he had the necessary strength, will or knowledge."[6]

Nursing Role: Nursing actions which are planned, implemented, and evaluated by the registered nurse in meeting the needs of the patient.

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[1]Ibid.

[2]Carter V. Good, ed., Dictionary of Education, 3d ed. (New York: McGraw-Hill Inc., 1973), p. 120.

[3]Council on Foods and Nutrition, American Medical Association, Nutrition Report (Chicago, Ill., 1962), p. 1.

[4]"Goals for the Lifetime Education of the Dietitian," p. 92.

[5]Marjorie E. Newton, Mary Ellen Beal, and Anselm L. Strauss, "Nutrition Aspects of Nursing Care," Nursing Research 16 (Winter 1967):48.

[6]Virginia Henderson, The Nature of Nursing (New York: The MacMillan Co., 1966), p. 15.

Patient: Any person, well or sick, who received health care services for the purposes of maintaining or restoring health.

Scope and Limitations

This study was limited to nursing educators associated with seventeen nursing programs established prior to 1969 within the University System of Georgia. The colleges in which these nursing programs were offered were geographically distributed throughout Georgia. All respondents were actively engaged in teaching or curriculum development during the year of this study.

Nursing faculty in hospital-based programs and faculty from private colleges of nursing in Georgia were not included. The resources and confidential data necessary to plan and carry out this research were not available from other than the participants mentioned above.

Nursing practitioners and nursing service administrators who would also be able to identify competencies essential for comprehensive nursing practice were not included in this study. The data for meeting the objectives of this study were not available from this service-oriented group of nursing practitioners.

Because the "opinion of experts" method was chosen in conducting this study, the survey was limited to nursing educators who qualify as both academicians and practitioners in the nursing profession.

It is generally accepted that personal attributes, academic and professional experiences of the faculty affect lifetime values pertinent to teaching effectiveness. This study was limited to objective demographic data compiled from the Data Sheet

for Respondents attached to this survey (Appendix A). Subjective data concerning attitudes and values of respondents were beyond the scope of the research methodology used in this study. The time frame and available resources did not allow investigation of subjective factors.

Importance of the Study

It is expected that the delivery of health care services will undergo major changes in the foreseeable future. The following factors are mitigating towards these changes:

1. Several plans of National Health Insurance are now under consideration in the Congress of the United States.
2. There is a substantial increase in the numbers and kinds of health manpower being prepared in high schools, technical schools, community colleges, and other institutions of higher learning.
3. There are rising expectations for health care services by consumers and demands that they have input into controlling the quality of care.
4. There is an ever increasing pressure to control rapidly rising health costs while improving the quality and extending the scope of health care.[1]

All of the above realities make it imperative that there be clear delineation of roles for each health worker if societal needs are to be met within an efficient and effective health care delivery system.[2]

Dr. Jean Mayer, Professor of Nutrition, Harvard University, wrote a commentary in which he discusses the current status of

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[1]Abraham Ribicoff, "The 'Healthiest Nation' Myth," Saturday Review, September 22, 1970, pp. 18-20.

[2]Raphael B. Levine, "Planning for Health," Atlanta Economic Review (June 1970):31-33.

nutrition education. He said,

> Nutritionists and health educators are unanimous in declaring that we need more nutrition education. The unspoken assumption is that professionals know how to do it. . . . Let us recognize that while we need nutrition education we are still very ignorant about the best way to do it. Nutrition education is not only the teaching of facts and ideas; it is changing behavior--a very basic behavior at that. It is urgent that we experiment with various ways to do this and keep careful notes of what works and what does not.[1]

Oppenheim viewed the descriptive survey method of research as "a form of planned collection of data" for the purpose of description of an existing situation and as a guide to action. He added that surveys are done in order to provide assistance in obtaining clear answers to meaningful questions or problems.[2]

The significance of this study was that it collected information specifying the competencies needed by nurses in meeting the nutritional needs of people, well or sick. When the research findings are made available to and utilized by nursing schools in planning the nutrition component of curricula, nursing students will have the opportunity to develop those nutritional competencies that nursing educators deem essential for nursing practice. It should follow that graduates of these programs would have the attitudes, knowledge, and skills to utilize nutrition as an integral part of nursing practice in care, cure, and coordination, the three foci of nursing. This competency-based educational process is intended to develop graduates with competence in

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[1] Jean Mayer, "Commentary," Journal of Nutrition Education 2 (Spring 1970 Supplement):80.

[2] A. N. Oppenheim, Questionnaire Design and Attitude Measurement (New York: Basic Books Inc., 1966), p. 297.

nutrition for preventive health care in the community as well as the care of acutely and chronically ill patients in institutions or in homes. These skilled nursing actions would, in turn, result in improved nutritional status for the recipients of health care. Improved nutritional status will help to reduce the many high incidence health problems in which inadequate or improper nutrition is an etiological or therapeutic factor.[1] It is well established within the natural and behavioral sciences that better nutritional status contributes to total well-being, increased human potential, and a better quality of life.[2]

Plan of Presentation

Chapter II of this study reviews related literature in nursing education and nursing practice. The method used in the research is detailed in Chapter III. The findings, analysis, and interpretation of the data and a discussion and summary of the findings will be covered in Chapter IV. Conclusions from the research and recommendations for further study are the topics to be discussed in Chapter V. An appendix of pertinent materials is attached together with a bibliography and the resources used.

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[1]Michael G. Wohl and Robert S. Goodhart, eds., Modern Nutrition in Health and Disease (Philadelphia: Lea and Febiger, 1968), passim.

[2]Mayer, Human Nutrition, passim.

CHAPTER II

REVIEW OF RELATED LITERATURE

The status of nutrition in nursing education and nursing practice was reflected in publications of the last twenty years. This literature dealt mainly with nutrition content in nursing curricula and the role of nurses in meeting nutritional needs of hospitalized patients. This was to be expected inasmuch as health care was, for the most part, crisis-oriented and the majority of registered nurses were employed in health care institutions, mainly hospitals. Only minimal work has been reported pertaining to the nurse's role in meeting nutritional needs of people in the community, the well, and the non-hospitalized sick. Further, a paucity existed in research about the nutritional role of the nurse prepared at the associate degree level. This lack was especially notable in view of the fact that the associate degree level was the fastest growing kind of nursing education program.

Nutrition in Nursing Education

In 1957, more than fifty years after nutrition was formally introduced into nursing curricula, Driver expressed serious concern about nutrition content and nutritional experiences being used to prepare students for nursing practice. She concluded that, in her opinion, the primary objective of this component of nursing curricula should be to help students to "develop concepts of the role

of nutrition in the maintenance of health on an optimum level--physically, mentally and emotionally throughout the life span."[1]

In 1960, the National League for Nursing published a monograph about teaching nutrition and diet therapy to nursing students. The assumption upon which they selected the content for the nutrition component of the curriculum was:

> The translation of school objectives into specific behaviors becomes the function of the curriculum outline in the subject field. The statement of objectives indicates the kind of outcomes for which the teacher plans. . . . The problem of selecting learning experiences is a problem of determining the kinds of experiences likely to produce given educational objectives, and also the problem of how to set up situations that will evoke or provide within the students the kind of experience desired.[2]

Sixteen "knowledges, understandings and abilities" were listed as essential for nurses in relation to nutrition and diet therapy. These were:

> Knowledge of the principles of foods and nutrition and the ability to apply these principles in the maintenance and improvement of her own health.
>
> Knowledge of the nutritional needs of persons during various stages of the developmental process.
>
> Knowledge of the nutritional requirements of individual patients as an important aspect of their health and the ability to apply principles of nutrition in planning adequate diets of individual patients.
>
> Knowledge and appreciation of the influence of certain social, cultural and religious customs upon dietary patterns.

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[1]Myra Driver, "What Should We Teach the Student Nurse in Nutrition and Diet Therapy," Proceedings of a Workshop, Nutrition in the Nursing Curriculum (Columbia, S.C., 1957), p. 7.

[2]Guidelines for Teaching Nutrition and Diet Therapy in Schools of Nursing, The League Exchange No. 48 (New York: National League for Nursing, 1960), p. 2.

Ability to plan therapeutic diets as ordered by the physician, taking into consideration the patient's physical conditions and his social, psychological and economic needs.

Ability to serve as liaison between the patient and professional personnel (i.e. physician, nutritionist, social worker) in interpreting the patient's nutritional needs and dietary problems).

Ability to teach the principles of nutrition to patients, families and groups of individuals.

Ability to provide dietary instruction to patients, families, and others concerning the planning and preparation of "normal" and more common therapeutic diets.

Knowledge and understanding of the various types of nutritional and dietary supplements utilized in an effort to establish and maintain adequate nutrition.

Ability to perform certain nursing activities that serve as a means of establishing and maintaining adequate nutrition of patients with certain abnormal physical and/or mental conditions.

Knowledge and appreciation of the role of the nutritionist in community health agencies.

Knowledge of and ability to utilize reliable resources in the areas of food, nutrition and diet therapy.

Ability to participate in community and professional activities that are designed to promote better understanding of the general food situations and local food problems.

Knowledge of the effects of inadequate nutrition upon the community, the country and the world.

Appreciation of the role of research in the area of nutrition in improvement of health status of families, communities, and the nations of the world.

Knowledge and understanding of the effect that certain disaster situations may have upon maintaining an adequate and safe food supply.[1]

Following this list of abilities, there was a statement to indicate that these sixteen items were not intended to be all inclusive.

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[1] Ibid., pp. 4-5.

Further, "teachers may identify other knowledges, understandings and abilities in nutrition that enrich their teaching program."[1]

The Final Report of the White House Conference on Food, Nutrition, and Health, 1970, recommended that there be increased emphasis on the quantity and quality of nutrition included in the educational programs for health professionals. This report reaffirmed the need for a sound foundation in nutrition knowledge and practices for nurses if nutrition is to be an integral component in the delivery of health care services. The importance of nurses, as health practitioners who should provide nutrition education and nutritional care, was clearly identified in this document.[2]

Two widely used textbooks specific to foundations of nursing included nutrition as an important foundation for optimal nursing practice. Matheney and others said:

> Nursing intervention in regard to nutrition is divided into two broad areas:
> 1. Knowledge and understanding required to provide for nutritional care of patients.
> 2. Nursing functions related to providing for these needs.[3]

White and others placed nutritional care as a priority concern of the nurse. They stated that the nurse must ask:

> What are the nutritional needs of each particular patient considering his age, developmental status, the nature of

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[1] Ibid.

[2] White House Conference on Food, Nutrition and Health, Final Report, pp. 154-61.

[3] Ruth V. Matheney et al., Fundamentals of Patient Centered Nursing (St. Louis: C. V. Mosby Co., 1972), p. 135.

> his illness, his cultural and socio-economic background, and, last but not least, his individual preferences.[1]

Newton, Ball, and Prater wrote three separate papers published together as "Nutritional Content in Nursing Curricula."[2] Newton addressed herself to "Potential for Deletion" of the nutrition component of nursing curricula. She maintained that the nurse practitioner must clarify how, when, and what nutritional care is provided if there is to be a sound rationale for nutrition in the curriculum. Newton concluded by saying:

> Now is not the time to worry whether nutrition in nursing is on the wane. It is more appropriate to establish the state of affairs and look at the broad picture. Dietitians cannot long assume the stance that nutrition is a science and dietitians are the professionals who possess its skills and then state that nurses must meet nutritional needs of patients. Perhaps the day of reckoning has arrived.[3]

Margaret Ball titled her portion of this compendium, "Potential for Implementation." Ball's belief was that nutrition not only belongs in the curriculum but that it needs scholarly implementation if nursing students are to have the opportunity to acquire essential nutritional knowledge and practices. Her assumptions were:

1. Nutrition is an integral <u>part</u> of nursing.
2. Nutrition is a basic factor in society today and a part of its progress; and

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[1] Dorothy T. White, Philip E. DeLorey, and Edith Rubino, <u>Fundamentals: The Foundation of Nursing</u> (Englewood Cliffs, N.J.: Prentice-Hall Inc., 1972), p. 107.

[2] Marjorie E. Newton, Margaret M. Ball, and Barbara M. Prater, "Nutrition Content in the Nursing Curricula," <u>Journal of Nutrition Education</u> 1 (Winter 1970):9-12.

[3] Newton, ibid.

3. There is a capacity for existence of nutrition in nursing curricula and exciting possibilities for new developments in the future.[1]

In support of her position, Ball stated that professional dietitians are not always available in small hospitals, nor will they be in the many kinds of health care agencies that will proliferate in the future. It was Ball's belief that the nurse is the next qualified person to the dietitian to deal with nutrition in health care. She concludes by stating:

> Nutrition instruction must meet the ever increasing need of the student nurse so that she may learn the fundamental principles of nutrition, modifications, and their importance in her own personal and professional life, as well as the lives of her patients and their families.[2]

Prater, in her "Reaction Paper" to these two diverse points of view, stated succinctly:

> It is apparent that though the knowledge of nutrition is assumed to be part of nursing, the functions related to nutrition in nursing have become more and more remote and nebulous.[3]

Approximately ten years after associate degree programs in nursing were established in this country, Newton pointed out that graduates of these programs were the acknowledged bedside nurse. She raised two questions:

1. What nutritional concepts does this nurse need in preparation for the role that she assumed upon becoming a registered nurse and beginning practice?
2. How should her conceptual preparation differ from those of nurses prepared in other levels of nursing education programs?

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[1]Ball, ibid.

[2]Ibid.

[3]Prater, ibid.

It was Newton's position that the A.D. nurse needs to:

1. Understand and appreciate the part that nutrition plays in achieving and maintaining good health and a productive life
2. Know what people should eat to achieve and maintain good health.
3. Apply the principles in 1 and 2 above to herself and others.
4. Be able to combat food misinformation with scientific knowledge.
5. Participate in therapeutic dietary regimes along with the physician, the patient, and the family.

This author placed the development of objectives to be of first importance in the teaching-learning activities. Following this, Newton identified the need for identification of pertinent knowledge, selection of suitable learning experiences, and determining appropriate methods of evaluation of student achievement. Newton concluded that it is obviously apparent that nutrition is a part of associate degree nursing curricula but "it should be able to be identified."[1]

Nutrition in Nursing Practice

In 1960, Newton and Knutson used the interview method with patients and hospital personnel to study what professional hospital personnel were doing about providing nutrition instruction for patients. Their findings showed that there was no clear delineation of responsibilities for assisting patients with their diets or providing basic nutrition information to patients during hospitalization. Physicians, dietitians, nursing faculty, medical and nursing staff and supervisors as well as nursing students were all

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[1]Marjorie Newton, "Nutrition in an Associate Degree Nursing Program," Nursing Outlook 9 (November 1961):678-79.

involved in one way or another with the patients' food. Yet, there was a serious lack of purposeful efforts in meeting nutritional needs of patients to expedite recovery or for the patients' comfort. It was reported that

> The student nurses expressed concern over the food intake of their patients. They had not communicated with anyone regarding diet or food intake but noted that when they observed a problem situation in the past, they notified the head nurse or charted them. They did not indicate that any communication was needed or carried on with either the physician or dietitian in this regard.[1]

Moore studied the role of the professional nurse and dietitian as these two hospital personnel interrelate in meeting the nutritional needs of patients. From the literature, Moore identified thirteen tasks that should be performed in meeting nutritional needs of hospitalized patients. Her findings tended to confirm those of Newton and Knutson as regards lack of clear delineation of roles. Moore found that there was significant agreement by nurses on only four of the thirteen nutritional tasks as part of nursing practice. She concluded that "there is a need for future study in order to clearly define the role of the professional nurse in meeting the nutritional needs of patients."[2] Further, Moore suggested there is a need to obtain more data concerning "what kinds of assistance the nurses and dietitians think

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[1]Marjorie E. Newton and Andie L. Knutson, "Nutrition Education of Hospitalized Patients," Journal of the American Dietetic Association 37 (September 1960):226-29.

[2]Sharon Moore, "The Role of the Professional Nurse in Meeting Nutritional Needs of the Patient," Project (Gainesville, Fla.: University of Florida, 1971). (Mimeographed.)

they ought to receive from, or provide to, one another."[1]

Newton, Beal, and Strauss studied the attitudes and opinions of practicing nurses in hospitals about their own academic experience in nutrition during nursing education as well as nutrition as part of nursing practice. They found that:

> Nurses at all staff levels report negative reaction to their educational experience in nutrition and/or diet therapy and
>
> The further nurses are away from the patient, the higher the staff position they hold, the higher the verbal priority they place on nutrition in nursing care and
>
> For the staff or bedside nurse, nutrition has a low priority.[2]

Mayer, in a study of house officers and nursing students in Boston hospitals, reported that "attitudes of house officers and nursing students in training suggest that they are aware of our nutritional practices and are eager to improve their knowledge."[3] Using a detailed questionnaire, the data showed that 71% of those interviewed felt that nutrition had received insufficient attention in curricula to prepare them for the practice situation. When the same students were asked the importance of nutrition in caring for patients, their responses were:

> 26% thought it was extremely important
> 59% thought it was very important

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[1] Ibid.

[2] Marjorie E. Newton, May E. Beal, and Alselm L. Strauss, "Nutritional Aspects of Nursing Care," Nursing Research 16 (Winter 1967):46-50.

[3] Jean Mayer, "On the Job Nutrition Teaching in a Hospital," Post Graduate Medicine 46 (October 1969):219-20.

12% thought it was fairly important
3% thought it was not important.[1]

Student nurses offered the opinion that "most registered nurses with whom they had come in contact did not know enough about nutrition to optimally care for patients."[2]

In 1962, the National League for Nursing released the following to its membership:

The registered nurse should be prepared to

1. Apply the principles of good nutrition to the maintenance and improvement of the nurse's own health.
2. Recognize and understand that the meeting of nutritional needs of individual patients is an integral part of therapy.
3. Carry out the physician's diet order as a shared responsibility with the dietitian.
4. Observe acceptance of the diet by the patient and assume responsibility for recording and reporting observations.
5. Appreciate the principles involved in food preparation and sanitation.
6. Consider the economic, social, psychological and physiological needs of patients when teaching the principles of foods and nutrition or modification of the normal diet.
7. Utilize opportunities for informal teaching of nutrition or modification of the normal diet.
8. Utilize reliable sources (references and agencies) from which resource materials and personnel may be obtained in the area of foods, nutrition and diet therapy.

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[1] Ibid.

[2] Ibid.

9. Recognize and understand the value of nutrition in the prevention of disease and particularly in community health.[1]

In 1974, Prevost and Butterworth studied the nutritional care of hospitalized patients. Their findings supported those of earlier studies and the authors concluded that "this preliminary study suggests that basic principles of nutrition are not being observed in support of significant numbers of hospitalized patients." These investigators strongly urged that a more extensive national study be undertaken to gather data on this important problem.[2]

In a study of another aspect of the problem, Harrison, Sanchez, and Young tried to determine the extent nutrition knowledge of public health nurses whose work was carried on outside of hospitals. Nurses included in their study had varying levels of nursing education and experience and many held either associate or baccalaureate degrees. Other participants in their study were diploma nursing school graduates and therefore did not hold a college degree. Four categories of knowledge were tested:

1. Diet evaluation for adequacy.
2. Physiological factors related to nutrition.
3. Influences to food intake, e.g. social, psychological, cultural, and economic factors.
4. Food nutrients and body functions.

The findings showed marked variation in nutrition knowledge among

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[1]Brochure, National League for Nursing, 10 Columbus Circle, New York, N.Y., 1962, p. 1.

[2]Elizabeth A. Prevost and C. E. Butterworth, Jr., "Nutritional Care of Hospitalized Patients," Americal Journal of Clinical Nutrition 27 (April 1974):432.

the 144 nurses tested. These nurses were employed by seven local health agencies in Michigan and assume similar responsibilities related to nutrition as an integral part of public health nursing practice. Nurses with higher levels of academic preparation scored significantly higher in three of the four categories measured. One of the conclusions from this study was that nurses need increased competence in nutrition and that the opportunity to develop this competence should be provided in nursing education programs.[1]

This review of the literature revealed four significant issues related to nutrition in nursing education and nursing practice:

1. Nutrition is an accepted component of nursing education and nursing practice
2. Further study is needed to identify the competencies in nutrition needs by nurses as well as those abilities which are specific to the two levels of nursing education
3. A gap appears to exist between nutrition in nursing curricula and nutritional abilities needed by nurses in the delivery of health care
4. A clarification of the role of nurses and other health workers is necessary if nutritional needs of patients are to be met.

The global problems of nutrition in nursing education as preparation for nursing practice are particularly relevant to nursing education programs in Georgia. The participating nursing programs in this study represented a microcosm of the issues present in the literature herein reviewed.

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[1]Gail G. Harrison, Ann MacPherson Sanchez, and Charlotte M. Young, "Public Health Nurses' Knowledge of Nutrition," Journal of the American Dietetic Association 55 (August 1969):133-38.

CHAPTER III

THE RESEARCH METHODOLOGY

Scaling of the Survey Instrument

The Likert Scale, developed in 1932, was adapted for use in scaling the data gathered in this study. Secord and Backman described the Likert scale as a procedure by which a large number of judges indicate their opinion by choosing one of five responses to each item--strongly agree, agree, undecided, disagree, strongly disagree. A weight can be assigned to each of these responses. Secord and Backman stated that research has documented reliability and validity where this scale is used.[1] Oppenheim said that "Likert scales tend to perform well when it comes to a reliable rough ordering of people with regard to a particular attitude."[2] Edwards pointed out that Likert has claimed and other researchers have confirmed that the summated-rating scale is simpler, easier to apply, and essentially as reliable as other more laborious scales used for scaling attitude or opinion surveys.[3]

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[1]Paul Secord and Carl W. Backman, Sound Psychology (New York: Mc-Graw Hill Book Co., 1964), pp. 103-6.

[2]Oppenheim, Questionnaire Design and Attitude Measurement, p. 297.

[3]Allen L. Edwards, Techniques of Attitude Survey Construction (New York: Appleton-Crofts, Inc., 1957), pp. 168-69.

Selection of Competency Statements

The competency statements used in this study drew upon the works of Oppenheim, Lanham, Mager, and Katz. Oppenheim stated that a "questionnaire is not just a list of questions or a form to be filled out. It is essentially a scientific instrument for measurement or collection of particular kinds of data."[1] Katz discussed factors to consider in preparing items for a research survey. He emphasized that items must convey to respondents the ideas pertaining to the research subject so that valid answers can be elicited. Additionally, the items must motivate the respondent to communicate the desired response.[2] The ideas of Lanham and Mager were applied in selecting appropriate items for meeting the objectives of the study. Lanham said,

> It is the determination of the tasks that comprise the job and the skills, knowledges, abilities, and responsibilities that are required for successful performance which differentiate that job from all others.[3]

Mager affirmed the importance of clearly analyzing what tasks the practitioner needs to perform before determining what the individual is being prepared to do. He made clear that essential skills must be designated before training can be decided upon.[4]

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[1]Oppenheim, Questionnaire Design and Attitude Measurement.

[2]Daniel Katz, "Foundation of Research Design," in Public Opinion and Propaganda, ed. Daniel Katz (New York: Dryden Press, 1954), pp. 662-86.

[3]Elizabeth Lanham, Job Evaluation (New York: Mc-Graw-Hill Book Co., 1955), pp. 124-75.

[4]Robert F. Mager, Analyzing Performance Problems (Palo Alto, Calif.: Fearon Publishers, 1972), passim.

The majority of competency statements included in each of the three sections of the survey were considered to be specifically within the role of nursing. Some of the competencies may be within the role of dietitians but if there is no dietitian available in hospitals, these tasks are performed by nurses. Other competencies may be performed by various health professionals such as physicians, nutritionists, and paraprofessionals such as practical nurses, physicians' assistants, and nursing assistants as well as by registered nurses. The inclusion of some competency statements in each of the three sections of the survey instrument for which agreement about the nurse's role is vague or nebulous was intended to provide the opportunity for gathering more definitive information on these competencies in relation to respective roles of health providers than has heretofore been reported in the literature.

Review of the First Draft of the Survey Instrument

The first draft of the survey instrument was reviewed and critiqued for clarity and comprehensiveness by four registered nurses, two registered dietitians, one health occupations educator, and a statistical consultant (education). All of these reviewers qualified as academicians and practitioners in their respective disciplines. The reviewers were not participants in the research study but had similar personal and professional attributes to the population surveyed. Their comments were used to finalize the survey instrument.

The Survey Instrument

A descriptive survey instrument consisting of fifty-five

items was used in this study (Appendix A). The items were the result of a literature search, interviews with nursing educators (nurses and nutritionists), and the experience of the investigator as a registered dietitian, public health nutritionist, and nursing educator. The items were categorized into three sections:

Section I - Nutrition in Health Maintenance and Restoration--32 items

Section II - Nutritional Care in Health Care Institutions--13 items

Section III - Nutrition in Community Health--10 items

The items in Section I are competencies required by all nurses whether functioning in institutions or in the community. The competency statements included in Section I to which the participants were asked to respond were:

SECTION I - Nutrition in Health Maintenance or Restoration

In providing nursing care for health maintenance or restoration, in institutions or in the community, the nurse should be able to:

1. Explain what is meant by a "balanced diet" for persons of any chronological age.
2. Record by the interview method current food intake and dietary practices.
3. Teach people how to improve nutritional status based on her knowledge of vital functions of nutrients.
4. Compare nutritional value of foods produced by differing methods of agriculture, manufacture, cooking and storage.
5. Use food composition tables to ascertain nutrient content of specific foods and meals.
6. Provide nutritional guidance that encompasses socio-economic and cultural factors as determinants of nutritional well being and food preferences.
7. Assess nutritional status using clinical observations, biochemical values, and Recommended Dietary Allowances as the frame of reference.

8. Give instructions about food purchasing, menu planning and food preparation that are beneficial to health.

9. Select and utilize accurate, current audiovisual materials for teaching normal nutrition to individuals and groups.

10. Recognize symptoms of malnutrition and initiate remedial action.

11. Prepare dietary plans for pregnant women that promote maternal and infant health.

12. Compare and evaluate breast and bottle feeding.

13. Teach formula preparation using aseptic, terminal, and single bottle methods.

14. Guide parents in the additions of solid foods to a baby's diet during the first year.

15. Detect food misinformation and quackery and take action to reduce these problems.

16. Describe government food assistance programs and arrange for participation of eligibles.

17. Demonstrate awareness of the unique social, emotional, and physical factors that influence food habits and nutritional status during adolescence.

18. Recognize nutritional problems associated with aging and take measures to assist the elderly to cope with these concerns.

19. Explain the scientific principles underlying patients' modified diets.

20. Describe, using food examples, diet changes required in conditions such as cardiovascular disease, diabetes, weight control.

21. Teach the Exchange Lists to patients.

22. Use audiovisual aids to reinforce patient teaching.

23. Provide diet instruction compatible with the physician's diet prescription.

24. Interpret the dietary plan to parents of a child with P.K.U. or other inborn errors of metabolism.

25. Determine the most appropriate communication and teaching skills in instructing individuals and families to cope with therapeutic diets.

26. Describe the effect of excessive alcohol on nutritional needs and well-being.

27. Have sufficient knowledge of the natural and behavioral sciences in order to care for the severely burned patient, e.g. effects of stress.

28. React constructively to social and psychological problems that arise because of dietary restriction, e.g. diabetes in adolescence.

29. Calculate a prescribed diet, e.g. C150 P80 F90, and work out an accurate menu plan which is acceptable to the patient.

30. Demonstrate awareness of current knowledge and practices in therapeutic nutrition.

31. Recommend community resources that assist individuals on modified diets, e.g. Diabetic Youth Camp, Colostomy Club.

32. Instruct patients regarding the special diets used in diagnostic procedures, e.g. fat free meal, limited calcium regimes, etc.

Comments: (Space for added competencies or comments)

Section II includes the nutritional competencies, in addition to those listed in Section I, that are used specifically by nurses in providing nutritional care in health care institutions. The competency statements in Section II were:

SECTION II - Nutritional Care in Health Care Institutions

In addition to the competencies in Section I, the nurse, in health care institutions, should be able to:

1. Incorporate patients' individual nutritional needs as an integral part of therapy.

2. Explain standard hospital diets to patients, e.g. full liquid, soft, etc.

3. Critically evaluate patients' trays for accuracy and acceptability.

4. Observe and record patients' actual dietary intake.

5. Coordinate the health team's activities in meeting dietary needs of patients.

6. Seek out opportunities to teach normal and therapeutic nutrition to patients and families.

7. Help a patient to understand changes necessitated by therapeutic diet and to adopt a sound attitude towards these changes.

8. Develop and monitor a plan for maintaining fluid and electrolyte balance.

9. Render nutritional care at the bedside, i.e. premeal care, meal time assistance, and postmeal care.

10. Facilitate the feeding of patients who are unable to eat independently.

11. Instruct and supervise other personnel in meeting nutritional needs of individual patients.

12. Coordinate functional departments in order to carry out the physician's nutrition (normal or therapeutic) prescription.

13. Establish procedures to control food-borne communicable diseases.

14. Under disaster conditions, utilize the available dietary facilities to feed the surrounding community.

Comments: (Space for added competencies or comments)

The competency statements in Section III are in addition to the basic competencies listed in Section I and apply specifically to nurses functioning <u>outside</u> of hospitals in community health nursing such as public health or school nursing. The items included in Section III were:

SECTION III - Nutrition in Community Health

In addition to the competencies in Section I, the nurse as a <u>professional health worker in the community</u> should be able to:

1. Foster and establish the teaching of nutrition in schools as an integral part of health education.

2. Support community action to influence legislation for consumer protection relevant to food manufacture and marketing practices.

3. Use current scientific knowledge in answering questions about "health foods."

4. Recognize and lend dignity to "alternate life styles" having dramatically different dietary practices.

5. Explain the proper use of food supplements, e.g. vitamins, minerals.

6. Teach homemakers methods of food handling that minimize food contamination and prevent food poisoning.

7. Recognize and assist "high risk" nutritionally vulnerable individuals and families.

8. Provide liaison between institutions and the home for continuity of nutritional care.

9. Recognize and provide assistance in cases of specific nutritional anomalies, e.g. diabetes, deficiency diseases.

10. Utilize knowledge of behavioral and natural sciences in helping individuals and families to improve dietary practices.

Comments: (Space for added competencies or comments)

The survey instrument was designed to permit respondents to associate each item with either the two-year or four-year level of nursing preparation or with both levels (Appendix A). If the respondent agreed with a specific competency, provision was made on the survey form for the respondent to indicate preference for inclusion of this competency in baccalaureate programs, in associate degree programs, or at both levels of nursing education. This specificity of data was necessary to meet the objectives of this research.

The Data Sheet for Respondents

A Data Sheet for Respondents (Appendix A) was attached to each survey form. The form was divided into two parts:

1. Information about the respondents, including:

   Level of academic preparation

   Institution of highest degree

   Years of teaching experience

   Years of nursing practice

   Age

   Sex

   Clinical concentration (major nursing field)

2. Information about nursing program of current assignment, including:

   Number of students in the programs according to years, i.e. first, second, third, and fourth year

   Year the programs were established

   Degree granted by institution, i.e. baccalaureate, associate degree, or higher

   Is a course in nutrition required?

   If "yes" to nutrition course, number of quarter hours of credit for course?

The demographic data compiled from the data form was necessary to answer two questions raised in this study:

1. Did the level of respondents' academic preparation influence the choice of competencies?

2. Did the level of the program with which the respondent was currently associated (associate degree or baccalaureate) influence the choice of competencies?

Additionally, the data compiled from the Data Sheet for Respondents could serve as a benchmark of personal and professional attributes for participants in these nursing programs. This information could also serve for comparative purposes against which to measure change in faculty composition over time.

The Population Surveyed

The population in this study consisted of 205 nursing educators in seventeen colleges within the University System of Georgia. Fourteen of the nursing programs offered the associate degree, and three programs offered the baccalaureate degree. The colleges were scattered throughout the state of Georgia. About two-thirds of the participants in this study were associated with the associate degree level of nursing education (two years), and the remaining one-third taught in four-year programs granting the baccalaureate degree in nursing.

Check for Order Bias

Two sequences of items were used for the survey instrument in order to check for order bias. Within each of the participating schools, half of the faculty received the first sequence of items, Form A. The remainder of the faculty received Form B (Appendix B) with a different sequence of items within each section.

Distribution of Survey and Collection of Responses

The survey instrument together with a set of instructions for completion of the forms and a cover letter were distributed during the last week in February, 1973. These materials were mailed to each of the 205 participants. The cover letter (Appendix A) briefly describing the purpose of the survey requested a return date of not later than April 1, 1973. A self-addressed, stamped envelope was attached for the response. Two follow-up letters were sent during March (Appendix C). Towards the end of March, a personal phone call was made to all non-respondents in an

effort to achieve the highest possible rate of return. By April 1, 130 responses were received; a 63% return rate was achieved.

CHAPTER IV

FINDINGS, INTERPRETATION, AND DISCUSSION

Return of the Survey Forms

With only two exceptions at least one-half of the faculty of each participating nursing program responded. Table 3 represents the rate of response from each of the seventeen programs. Participation within each school ranged from a low of 29% for one program to complete coverage of 100% response from faculty of two schools. It should be added that the responses gave every evidence of conscientious effort to fully complete the forms. Few blanks were found in the response columns and the greatest number of non-response to any one item was six.

Data Sheet for Respondents

In order to establish the characteristics of participants, information was requested from faculty about themselves and the programs in which they teach. The profile of respondents serves as a background for readers of the study and may supply a measure of comparability for future studies. This information was compiled from 130 respondents of the population surveyed, a 63% sample.

Information about respondents

Ninety-eight percent, 124 of 126 who reported their sex, were female. Four respondents did not indicate sex. The age distribution of respondents is shown on Table 4.

TABLE 3

RATE OF RETURN OF SURVEY FORMS

School	Number Sent	Number Returned	Percent Return
1	7	5	71.4
2	6	3	50.0
3	7	2	28.6
4	12	8	66.7
5	9	8	88.9
6	7	5	71.4
7	7	5	71.4
8	17	10	58.8
9	6	6	100.0
10	19	16	84.2
11	8	8	100.0
12	13	8	61.5
13	22	11	50.0
14	7	4	57.1
15	43	23	53.5
16	6	4	66.7
17	9	4	44.4
Total	205	130	

TABLE 4

AGE DISTRIBUTION OF RESPONDENTS

Age Range	Number	Percent
Under 30	41	32
30-50	74	57
Over 50	12	9
Not reported	3	2

Responses to the request for years of teaching experience showed that 59% of the group had between one and five years of teaching experience with no respondent reporting less than one year. Twenty-two percent had taught five to ten years, and 19% had more than ten years of teaching experience.

In tabulating the years of nursing practice of the respondents, 45%, almost one-half of the group, reported over ten years of nursing practice; and an additional 18% of the sample had five to ten years. About one-third of the group had between one and five years of nursing practice before joining a faculty, and only five faculty members reported no nursing practice experience prior to becoming teachers.

Table 5 presents the tabulation of years of teaching and nursing practice of the respondents.

It is informative to note both the degrees attained by faculty and the geographical location of the institution granting participants' highest degrees. Table 6 shows the degrees earned, and Table 7 gives the location of the institution from which the

respondent's highest degree was received. The totals in both cases are higher than the number of respondents since many persons earned more than one degree; and, in a few cases, several universities were reported instead of only one, as requested.

Table 6 shows that over three-fifths of the sample had at least a B.S., M.N., or M.S.N. degree. The greatest number of degrees earned in any single state, 41%, were received in Georgia. Twenty-seven states are represented on Table 7.

TABLE 5

NUMBER OF YEARS OF RESPONDENTS' TEACHING EXPERIENCE AND NURSING PRACTICE

Range of Years	Teaching Experience		Nursing Practice	
	Number	Percent	Number	Percent
None	--	--	5	4
1-5 years	76	59	42	33
5-10 years	29	22	24	18
Over 10 years	25	19	59	45

TABLE 6

DEGREES EARNED BY RESPONDENTS

Degree	Number	Percent
Associate	9	7
Diploma (not a degree)	38	29
B.S.N.	80	62
M.N. or M.S.N.	80	62
Doctorate	2	2
Other		
B.A., B.S.	5	
M.A., M.Ed.	13	21
Post-graduate study	10	

TABLE 7

LOCATION OF INSTITUTION OF RESPONDENTS' HIGHEST EARNED DEGREE (In Descending Order by States)[a]

	Number	Percent
Georgia	55	41
Emory	35	27
Medical College of Georgia	15	11
Other	5	4
Alabama	9	7
University of Alabama	8	
Other	1	
Maryland	7	5
University of Maryland	6	5
Other	1	1[b]
Florida	6	5
Pennsylvania	6	5
New York	5	4
Tennessee	5	4
Virginia	5	4
North Carolina	4	3
California	3	2
District of Columbia	3	2
Washington	3	2
Wisconsin	3	2
Ohio, Massachusetts, and Texas (2 each)	6	5
Colorado, Connecticut, Illinois, Indiana, Iowa, Kansas, Louisiana, Michigan, Minnesota, Mississippi, Oklahoma (1 each)	11	8
Total	133	100

[a] Institutions reported 5 or more times have been singled out.

[b] Add to more than total due to rounding.

A final vector along which each respondent furnished data was the area of clinical concentration or specialized expertise in nursing fields. In responding to this query some respondents reported more than one area of clinical emphasis giving a total larger than the size of the sample itself. This information may be an indication of breadth of preparation and experience for about one-fifth of the group. Even this estimate may be an understatement of respondents' major fields, since the item may have been interpreted as requiring only a single response. The breakdown of this data is presented in Table 8.

TABLE 8

RESPONDENTS' AREA OF CLINICAL EXPERTISE
OR MAJOR FIELD

Nursing Areas	Number	Percent
Medical-Surgical	68	45
Maternal and Child	29	19
Psychiatric	16	11
Pediatric	12	8
Public Health	10	7
Rehabilitation	4	2
Other (not specified)	12	8
Total	151	100

Information about nursing programs of respondents' current association

The preponderence of the 130 respondents to the survey taught first and second year students, usually both, as shown in Table 9.

TABLE 9

LEVEL OF STUDENTS AND NUMBER OF STUDENTS PER TEACHER

(1) Students' Level	(2) No. of Respondents Teaching at This Level	(3)[a] No. of Students Per Teacher
First year	114	81
Second year	106	58
Third year	29	53
Fourth year	27	32
Master's or other	8	28
No report	2	--

[a]Not all faculty reported the number of students whom they taught; therefore, the figures in column (3) represent a slightly smaller sample than those in column (2).

The number of respondents in column (2), those teaching first and second year students, represents the total of faculty in associate degree programs plus faculty teaching first and second year students in baccalaureate programs. For this reason, the total of column (2) represents a higher number than the total sample population. Column (3) shows the number of students with whom faculty had contact responsibility, either in classroom teaching or clinical experience areas. It should not be interpreted to

represent the faculty to student ratio. Fourteen associate degree and only three baccalaureate programs participated in this study, and therefore the number of faculty in columns (2) and (3) is higher for the first and second years than the numbers for the third and fourth years. One hundred and four responses to the inquiry about when nursing programs were established demonstrate the recency of programs with which faculty respondents were associated. Twenty-six of the sample population did not provide this information. Eighty of the 104 respondents, about four-fifths of those who answered this inquiry, stated that the program with which they were associated was established between 1966 and 1970.

The types of programs in which faculty were currently active appear on Table 10.

TABLE 10

NUMBER OF RESPONDENTS BY LEVEL OF PROGRAMS

(1) Type of Program	(2) Number	(3) Percent
Associate Degree	99	67
Baccalaureate	36	25
Master's	6	4
Other	2	1
No response	4	3
Total	147	100

Of the total number, 147, seventeen respondents taught in a program that offered both the associate and baccalaureate degrees, and are

shown at both levels in column (2), Table 10. Approximately 60% of the 130 in the sample population taught only at the associate degree level. The other 40% taught either only in baccalaureate programs or in more than one level of program.

Information was also requested to learn whether these programs required a course in nutrition and the amount of credit granted for the course, if included in the curriculum. Seventy respondents reported that no nutrition course was offered, among which seven remarked that the subject was integrated throughout the program. Fifty-five responded that a nutrition course was included in their curriculum. Five abstentions completed the total. In other words, less than one-half (forty-four) of the participating programs in this study required a formal course in nutrition. In programs in which a nutrition course was taught, forty-three respondents (78%) stated that three quarter hours of credit were granted. The remaining twelve respondents (22%) reported that five quarter hours were granted for the nutrition course.

The tabulation of all of the above information and data from the Data Sheet for Respondents supplies a background against which the results of the survey itself may be examined. The personal and professional attributes of respondents and the data about the programs with which they were associated may also provide a benchmark for future studies.

Responses on Two Forms of Survey Instrument (Form A and Form B)

Sixty-seven of Form A and sixty-three of Form B of the survey were returned, providing an almost equal distribution of

return of the two versions. Form A and Form B were tallied separately to test for order effect. The agreement of responses to the competency items in Forms A and B was so great that no formal test for order was deemed necessary. For only one item (No. 3 in Form A which appeared as No. 6 in Form B) was there evidence of divergence, and this difference was with respect to level of preparation rather than degree of acceptance of the item. Therefore, there was no effect on the weighting of this one item. With such marked similarity in response patterns of the two forms, it was possible to merge the responses on Form A and Form B and look at all returned survey forms (130) as a unit.

Scoring of Items and Tabulation of Findings

The following weights were assigned to the responses:

Strongly agree	+2
Agree	+1
Uncertain	0
Disagree	-1
Strongly disagree	-2

Using these weights, the average score was calculated for each item within each section. For the most part, based on average scores, there was a marked unanimity of agreement among the respondents as shown on Table II.

The accord in Section III was less emphatic than in Sections I and II, as evidenced by the smaller percentage, only 30% of the items, in the "strongly agree" category. The items included in Section III are competencies specific to community health nursing. The larger number of respondents in this study taught in associate degree programs in which the theoretical content and clinical learning experiences were, for the most part, hospital-based and

crisis-oriented. Considering this situation, it is reasonable to expect less unanimity of agreement about community health competencies than for the competencies in the other two sections of the survey instrument.

TABLE 11

RANGE OF SCORES ON SURVEY ITEMS

	Section I	Section II	Section III
Strongly agree			
Number of items	19	9	3
Range of scores[a]	1.51-1.82	1.52-1.78	1.54-1.62
Respondents (%)	59	64	30
Agree			
Number of items	13	5	7
Range of scores[b]	.76-1.49	.97-1.43	1.14-1.45
Respondents (%)	41	36	70

[a]Where the possible range would be 1.51-2.00.

[b]Where the possible range would be .51-1.50.

A total score, using the weights indicated above, was calculated for each item. This total score divided by the number of respondents provided an average score for each competency statement in each section. The items within each of the three sections of the survey instrument were ranked according to this average score. The rank order based on average scores of the competencies within each of the three sections is presented on Table 12.

TABLE 12

RANK ORDER OF COMPETENCIES BASED
ON AVERAGE SCORES

SECTION I - Nutrition in Health Maintenance or Restoration

In providing nursing care for health maintenance or restoration, in institutions or in the community, the nurse should be able to:

Rank Order	Item No.	
1	1.	Explain what is meant by a "balanced diet" for persons of any chronological age.
2	6.	Provide nutritional guidance that encompasses socioeconomic and cultural factors as determinants of nutritional well-being and food preferences.
3	18.	Recognize nutritional problems associated with aging and take measures to assist the elderly to cope with these concerns.
4	3.	Teach people how to improve nutritional status based on her knowledge of vital functions of nutrients.
4	11.	Prepare dietary plans for pregnant women that promote maternal and infant health.
6	28.	React constructively to social and psychological problems that arise because of dietary restrictions, e.g. diabetes in adolescence.
6	2.	Record by the interview method current food intake and dietary practices.
6	27.	Have sufficient knowledge of the natural and behavioral sciences in order to care for the severely burned patient, e.g. effects of stress.
9	20.	Describe, using food examples, diet changes required in conditions such as cardiovascular disease, diabetes, weight control.
10	17.	Demonstrate awareness of the unique social, emotional, and physical factors that influence food habits and nutritional status during adolescence.

TABLE 12--Continued

Rank Order	Item No.	
11	19.	Explain the scientific principles underlying patients' modified diets.
11	31.	Recommend community resources that assist individuals on modified diets, e.g. Diabetic Youth Camp, Colostomy Club.
13	22.	Use audiovisual aids to reinforce patient teaching.
14	12.	Compare and evaluate breast and bottle feeding.
15	32.	Instruct patients regarding the special diets used in diagnostic procedures, e.g. fat free meal, limited calcium regimes, etc.
15	21.	Teach the Exchange Lists to patients.
15	25.	Determine the most appropriate communication and teaching skills in instructing individuals and families to cope with therapeutic diets.
18	23.	Provide diet instruction compatible with the physician's diet prescription.
19	9.	Select and utilize accurate, current audiovisual materials for teaching normal nutrition to individuals and groups.
20	15.	Detect food misinformation and quackery and take action to reduce these problems.
21	14.	Guide parents in the additions of solid foods to a baby's diet during the first year.
21	13.	Teach formula preparation using aseptic, terminal, and single bottle methods.
23	10.	Recognize symptoms of malnutrition and initiate remedial action.
24	8.	Give instructions about food purchasing, menu planning and food preparation that are beneficial to health.
25	26.	Describe the effect of excessive alcohol on nutritional needs and well-being.

TABLE 12--Continued

Rank Order	Item No.	
26	24.	Interpret the dietary plan to parents of a child with P.K.U. or other inborn errors of metabolism.
27	30.	Demonstrate awareness of current knowledge and practices in therapeutic nutrition.
28	5.	Use food composition tables to ascertain nutrient content of specific foods and meals.
29	7.	Assess nutritional status using clinical observations, biochemical values, and Recommended Dietary Allowances as the frame of reference.
30	16.	Describe government food assistance programs and arrange for participation of eligibles.
31	29.	Calculate a prescribed diet, e.g. C150 P80 F90, and work out an accurate menu plan which is acceptable to the patient.
32	4.	Compare nutritional value of foods produced by differing methods of agriculture, manufacture, cooking and storage.

SECTION II - Nutritional Care in Health Care Institutions

In addition to the competencies in Section I, the nurse, in health care institutions, should be able to:

Rank Order	Item No.	
1	10.	Facilitate the feeding of patients who are unable to eat independently.
2	4.	Observe and record patients' actual dietary intake.
3	2.	Explain standard hospital diets to patients, e.g. full liquid, soft, etc.
4	9.	Render nutritional care at the bedside, i.e. premeal care, meal time assistance and post-meal care.
5	1.	Incorporate patients' individual nutritional needs as an integral part of therapy.

TABLE 12--Continued

Rank Order	Item No.	
5	7.	Help a patient to understand changes necessitated by therapeutic diet and to adopt a sound attitude towards these changes.
7	11.	Instruct and supervise other personnel in meeting nutritional needs of individual patients.
8	5.	Coordinate the health team's activities in meeting dietary needs of patients.
8	6.	Seek out opportunities to teach normal and therapeutic nutrition to patients and families.
10	3.	Critically evaluate patients' trays for accuracy and acceptability.
11	12.	Coordinate functional departments in order to carry out the physician's nutrition (normal or therapeutic) prescription.
12	8.	Develop and monitor a plan for maintaining fluid and electrolyte balance.
13	14.	Under disaster conditions, utilize the available dietary facilities to feed the surrounding community.
14	13.	Establish procedures to control food-borne communicable diseases.

SECTION III - Nutrition in Community Health

In addition to the competencies in Section I, the nurse as a professional health worker in the community should be able to:

Rank Order	Item No.	
1	9.	Recognize and provide assistance in cases of specific nutritional anomalies, e.g. diabetes, deficiency diseases.
2	5.	Explain the proper use of food supplements, e.g. vitamins, minerals.

TABLE 12--Continued

Rank Order	Item No.	
2	10.	Utilize knowledge of behavioral and natural sciences in helping individuals and families to improve dietary practices.
4	3.	Use current scientific knowledge in answering questions about "health foods."
5	4.	Recognize and lend dignity to "alternate life styles" having dramatically different dietary practices.
6	7.	Recognize and assist "high risk" nutritionally vulnerable individuals and families.
7	8.	Provide liaison between institutions and the home for continuity of nutritional care.
8	2.	Support community action to influence legislation for consumer protection relevant to food manufacture and marketing practices.
9	1.	Foster and establish the teaching of nutrition in schools as an integral part of health education.
10	6.	Teach homemakers methods of food handling that minimize food contamination and prevent food poisoning.

Competencies Selected According to Type of Nursing Program(s)

As shown on Table 11 (Range of Scores on Survey Items), there was marked unaminity of agreement in response to the competency items in all three sections of the survey instrument. Further, a large number of faculty indicated that competency items were suitable for both programs of nursing education, while other respondents favored a single program (associate degree or baccalaureate) for which they considered the specific competency was best suited. Because of this unaminity in the findings, it was

advisable to look at the data in two ways:

1. Competencies favored for "both" associate degree and baccalaureate programs over a single program

2. Competencies more strongly preferred for baccalaureate program versus associate degree program, when these programs were compared with each other

This outcome was achieved by testing two hypotheses relating to the statements:

1. That a preference for both (A.D. and Bacc.) over A.D. or Bacc. alone would be present if "both" were selected significantly more often than a single program

2. That a preference for inclusion in the Bacc. program would be demonstrated if it was selected more often than the A.D. program when the two programs were compared with each other. The opposite situation, i.e. a preference for inclusion in the A.D. program, could also be tested for significance of results

In order to determine significance, t values were calculated for the competency items. The results of these tests are shown on Table 13. It must be remembered that these analyses are not comparable with the treatment of the other data, since the number of responses falling into the "strongly agree" and "agree" category were pooled so that no account was taken of strength of response.

Table 14 presents a summation of the number of competency items significantly selected according to type of nursing program(s) in each section of the survey instrument.

TABLE 13

SELECTION OF NUTRITION COMPETENCIES ACCORDING TO LEVELS OF NURSING EDUCATION

SECTION I - Nutrition in Health Maintenance or Restoration

In providing nursing care for health maintenance or restoration, in institutions or in the community, the nurse should be able to:

(1)	(2) Selected for Both A.D. and Bacc. Programs over Single Program[a]	(3) Compared with Each Other[b] More Strongly Preferred for Bacc. Program	(4) Compared with Each Other[b] More Strongly Preferred for A.D. Program
1. Explain what is meant by a "balanced diet" for persons of any chronological age.	S.	N.S.[c]	N.S.
2. Record by the interview method current food intake and dietary practices.	S.	N.S.	N.S.
3. Teach people how to improve nutritional status based on her knowledge of vital functions of nutrients.	S.	S.	--

[a]Significance level = 0.001.

[b]Significance level = 0.05.

[c]N.S. is not significant.

TABLE 13--Continued

(1)	(2) Selected for Both A.D. and Bacc. Programs over Single Program[a]	(3) Compared with Each Other[b] More Strongly Preferred for Bacc. Program	(4) Compared with Each Other[b] More Strongly Preferred for A.D. Program
4. Compare nutritional value of foods produced by differing methods of agriculture, manufacture, cooking, and storage.	N.S.[c]	S.	--
5. Use food composition tables to ascertain nutrient content of specific foods and meals.	S.	N.S.	N.S.
6. Provide nutritional guidance that encompasses socioeconomic and cultural factors as determinants of nutritional well-being and food preferences.	S.	S.	--
7. Assess nutritional status using clinical observations, biochemical values, and Recommended Dietary Allowances as the frame of reference.	N.S.	S.	--

[a]Significance level = 0.001.

[b]Significance level = 0.05.

[c]N.S. is not significant.

TABLE 13--Continued

(1)	(2) Selected for Both A.D. and Bacc. Programs over Single Program[a]	(3) Compared with Each Other[b] More Strongly Preferred for Bacc. Program	(4) Compared with Each Other[b] More Strongly Preferred for A.D. Program
8. Give instructions about food purchasing, menu planning and food preparation that are beneficial to health.	S.	N.S.[c]	N.S.
9. Select and utilize accurate, current audiovisual materials for teaching normal nutrition to individuals and groups.	N.S.	S.	--
10. Recognize symptoms of malnutrition and initiate remedial action.	S.	S.	--
11. Prepare dietary plans for pregnant women that promote maternal and infant health.	S.	N.S.	N.S.
12. Compare and evaluate breast and bottle feeding.	S.	N.S.	N.S.

[a]Significance level = 0.001.

[b]Significance level = 0.05.

[c]N.S. is not significant.

TABLE 13--Continued

(1)	(2) Selected for Both A.D. and Bacc. Programs over Single Program[a]	(3) Compared with Each Other[b] More Strongly Preferred for Bacc. Program	(4) Compared with Each Other[b] More Strongly Preferred for A.D. Program
13. Teach formula preparation using aseptic, terminal, and single bottle methods.	S.	N.S.[c]	N.S.
14. Guide parents in the additions of solid foods to a baby's diet during the first year.	S.	S.	--
15. Detect food misinformation and quackery and take action to reduce these problems.	S.	N.S.	N.S.
16. Describe government food assistance programs and arrange for participation of eligibles.	N.S.	S.	--

[a]Significance level = 0.001.

[b]Significance level = 0.05.

[c]N.S. is not significant.

TABLE 13--Continued

(1)	(2) Selected for Both A.D. and Bacc. Programs over Single Program[a]	(3) Compared with Each Other[b] More Strongly Preferred for Bacc. Program	(4) Compared with Each Other[b] More Strongly Preferred for A.D. Program
17. Demonstrate awareness of the unique social, emotional, and physical factors that influence food habits and nutritional status during adolescence.	S.	N.S.[c]	N.S.
18. Recognize nutritional problems associated with aging and take measures to assist the elderly to cope with these concerns.	S.	N.S.	N.S.
19. Explain the scientific principles underlying patients' modified diets.	S.	S.	--
20. Describe, using food examples, diet changes required in conditions such as cardiovascular disease, diabetes, weight control.	S.	N.S.	N.S.

[a]Significance level = 0.001.

[b]Significance level = 0.05.

[c]N.S. is not significant.

TABLE 13--Continued

(1)		(2) Selected for Both A.D. and Bacc. Programs over Single Program[a]	(3) Compared with Each Other[b] More Strongly Preferred for Bacc. Program	(4) Compared with Each Other[b] More Strongly Preferred for A.D. Program
21.	Teach the Exchange Lists to patients.	S.	N.S.[c]	N.S.
22.	Use audiovisual aids to reinforce patient teaching.	S.	S.	--
23.	Provide diet instruction compatible with the physician's diet prescription.	S.	N.S.	N.S.
24.	Interpret the dietary plan to parents of a child with P.K.U. or other inborn errors of metabolism.	N.S.	S.	--
25.	Determine the most appropriate communication and teaching skills in instructing individuals and families to cope with therapeutic diets.	N.S.	S.	--
26.	Describe the effect of excessive alcohol on nutritional needs and well-being.	S.	N.S.	N.S.

[a]Significance level = 0.001.

[b]Significance level = 0.05.

[c]N.S. is not significant.

TABLE 13--Continued

(1)	(2) Selected for Both A.D. and Bacc. Programs over Single Program[a]	(3) Compared with Each Other[b] More Strongly Preferred for Bacc. Program	(4) Compared with Each Other[b] More Strongly Preferred for A.D. Program
27. Have sufficient knowledge of the natural and behavioral sciences in order to care for the severely burned patient, e.g. effects of stress	S.	S.	--
28. React constructively to social and psychological problems that arise because of dietary restriction, e.g. diabetes in adolescence.	S.	N.S.[c]	N.S.
29. Calculate a prescribed diet, e.g. C150 P80 F90, and work out an accurate menu plan which is acceptable to the patient.	N.S.	S.	--
30. Demonstrate awareness of current knowledge and practices in therapeutic nutrition.	S.	N.S.	N.S.

[a]Significance level = 0.001.

[b]Significance level = 0.05.

[c]N.S. is not significant.

TABLE 13--Continued

(1)	(2) Selected for Both A.D. and Bacc. Programs over Single Program[a]	(3) Compared with Each Other[b] More Strongly Preferred for Bacc. Program	(4) Compared with Each Other[b] More Strongly Preferred for A.D. Program
31. Recommend community resources that assist individuals on modified diets, e.g. Diabetic Youth Camp, Colostomy Club.	S.	N.S.[c]	N.S.
32. Instruct patients regarding the special diets used in diagnostic procedures, e.g. fat free meal, limited calcium regimes, etc.	S.	N.S.	N.S.

[a]Significance level = 0.001.

[b]Significance level = 0.05.

[c]N.S. is not significant.

TABLE 13--Continued

SECTION II - Nutritional Care in Health Care Institutions

In addition to the competencies in Section I, the nurse, in health care institutions, should be able to:

(1)	(2) Selected for Both A.D. and Bacc. Programs over Single Program[b]	(3) Compared with Each Other[b] More Strongly Preferred for Bacc. Program	(4) Compared with Each Other[b] More Strongly Preferred for A.D. Program
1. Incorporate patients' individual nutritional needs as an integral part of therapy.	S.	N.S.[c]	N.S.
2. Explain standard hospital diets to patients, e.g. full liquid, soft, etc.	S.	--	S.
3. Critically evaluate patients' trays for accuracy and acceptability.	S.	N.S.	N.S.
4. Observe and record patients' actual dietary intake.	S.	--	S.

[b]Significance level = 0.05.

[c]N.S. is not significant.

TABLE 13--Continued

(1)	(2)	(3) Compared with Each Other[b]	(4) Compared with Each Other[b]
	Selected for Both A.D. and Bacc. Programs over Single Program[b]	More Strongly Preferred for Bacc. Program	More Strongly Preferred for A.D. Program
5. Coordinate the health team's activities in meeting dietary needs of patients.	N.S.[c]	S.	--
6. Seek out opportunities to teach normal and therapeutic nutrition to patients and families.	S.	N.S.	N.S.
7. Help a patient to understand changes necessitated by therapeutic diet and to adopt a sound attitude towards these changes.	S.	N.S.	N.S.
8. Develop and monitor a plan for maintaining fluid and electrolyte balance.	S.	S.	--
9. Render nutritional care at the bedside, i.e. premeal care, meal time assistance and postmeal care.	S.	--	S.

[b]Significance level = 0.05.

[c]N.S. is not significant.

TABLE 13--Continued

(1)	(2) Selected for Both A.D. and Bacc. Programs over Single Program[b]	(3) Compared with Each Other[b] More Strongly Preferred for Bacc. Program	(4) Compared with Each Other[b] More Strongly Preferred for A.D. Program
10. Facilitate the feeding of patients who are unable to eat independently.	S.	--	S.
11. Instruct and supervise other personnel in meeting nutritional needs of individual patients.	S.	N.S.[c]	N.S.
12. Coordinate functional departments in order to carry out the physician's nutrition (normal or therapeutic) prescription.	N.S.	S.	--
13. Establish procedures to control food-borne communicable diseases.	N.S.	S.	--
14. Under disaster conditions, utilize the available dietary facilities to feed the surrounding community.	N.S.	S.	--

[b]Significance level = 0.05.

[c]N.S. is not significant.

TABLE 13--Continued

SECTION III - Nutrition in Community Health

In addition to the competencies in Section I, the nurse as a professional health worker in the community should be able to:

(1)	(2) Selected for Both A.D. and Bacc. Programs over Single Program[d]	(3) Compared with Each Other[b] More Strongly Preferred for Bacc. Program	(4) Compared with Each Other[b] More Strongly Preferred for A.D. Program
1. Foster and establish the teaching of nutrition in schools as an integral part of health education.	N.S.[c]	S.	--
2. Support community action to influence legislation for consumer protection relevant to food manufacture and marketing practices.	N.S.	N.S.	N.S.
3. Use current scientific knowledge in answering questions about "health foods."	S.	S.	--

[b]Significance level = 0.05.

[c]N.S. is not significant.

[d]Significance level = 0.005.

TABLE 13--Continued

(1)	(2) Selected for Both A.D. and Bacc. Programs over Single Program[d]	(3) Compared with Each Other[b] More Strongly Preferred for Bacc. Program	(4) Compared with Each Other[b] More Strongly Preferred for A.D. Program
4. Recognize and lend dignity to "alternate life styles" having dramatically different dietary practices.	S.	S.	--
5. Explain the proper use of food supplements, e.g. vitamins, minerals.	S.	S.	--
6. Teach homemakers methods of food handling that minimize food contamination and prevent food poisoning.	S.	S.	--
7. Recognize and assist "high risk", nutritionally vulnerable individuals and families.	S.	S.	--
8. Provide liaison between institutions and the home for continuity of nutritional care.	N.S.[c]	S.	--

[b] Significance level = 0.05.

[c] N.S. is not significant.

[d] Significance level = 0.005.

TABLE 13--Continued

(1)	(2) Selected for Both A.D. and Bacc. Programs over Single Program[d]	(3) Compared with Each Other[b] More Strongly Preferred for Bacc. Program	(4) Compared with Each Other[b] More Strongly Preferred for A.D. Program
9. Recognize and provide assistance in cases of specific nutritional anomalies, e.g. diabetes, deficiency diseases.	S.	S.	--
10. Utilize knowledge of behavioral and natural sciences in helping individuals and families to improve dietary practices.	N.S.[c]	S.	--

[b] Significance level = 0.05.

[c] N.S. is not significant.

[d] Significance level = 0.005.

TABLE 14

NUMBER OF COMPETENCY ITEMS SIGNIFICANTLY SELECTED ACCORDING TO TYPE OF PROGRAM(S)

	Total Number of Items	Number of Items Selected for Both Programs over a Single Program	Number of Items Selected for One Program over the Other	
			Bacc.	A.D.
Section I	32	25[a]	13[b]	--
Section II	14	10[b]	5[b]	4[b]
Section III	10	6[c]	9[b]	--

[a]Significance level = 0.001.

[b]Significance level = 0.05.

[c]Significance level = 0.005.

Discussion of Findings in Three Sections of Survey Instrument

Discussion of Section I

In reviewing the specific competencies and selections made by the respondents, it is evident that faculty members exercised considerable discrimination in their responses. For example, Item No. 1 (Section I) attained the highest average score of agreement, plus 1.82 out of a possible 2.0. This same item was favored for "both" programs over a single program as seen in Table 13 (Selection of Nutrition Competencies According to Levels of Nursing Education). However, columns (3) and (4) do not show a preference for this competency in either program, when these two programs are compared with each other. The item "Explain what is meant by a

balanced diet for persons of any chronological age" is a competency utilized by nurses at all levels of academic preparation and is universally accepted as basic to nursing practice. Another rather striking differentiation is illustrated by Item No. 7 (Section I), "Assess nutritional status using clinical observations, biochemical values, Recommended Dietary Allowances as a frame of reference." This competency was not favored for "both" programs over a single program but was more strongly preferred for the baccalaureate program when the two programs were compared with each other. The abilities required for assessment of nutritional status as a component of total health status have traditionally been within the realm of nurses prepared in four year college nursing programs. These examples tend to confirm the degree of discrimination of faculty members in their selection of competencies.

Discussion of Section II

The differences pointed up in columns (3) and (4) of Section II are particularly informative in relation to the objectives of this study. Of the total of 56 items on the survey instrument, only four competencies appearing in Section II (Nutrition in Health Care Institutions) were more strongly preferred for associate degree programs versus baccalaureate programs. These items were:

Section II:

Item No. 2--"Explain standard hospital diets to patients, e.g. full, liquid, soft, etc."

No. 4--"Observe and record patients' actual dietary intake"

No. 9--"Render nutritional care at the bedside, i.e. premeal care, meal time assistance and post-meal care"

No. 10--"Facilitate the feeding of patients who are unable to eat independently"

The above four items have traditionally been within the role of technical nursing personnel in hospitals. These four items were favored for "both" programs over a single program but more strongly preferred for the associate degree program over the baccalaureate program when compared with each other. Nursing educators agree with some exceptions that the nurse educated at the higher level should be equipped with all of the same competencies as nurses with shorter or lesser levels of nursing education. However, faculty members suggest that students receiving higher levels of preparation should have not only more competencies than nurses prepared in associate degree programs but should develop greater depth and breadth in application of basic competencies essential for comprehensive nursing practice.

Discussion of Section III

The data in Section III, columns (3) and (4), vary somewhat from the findings in Sections I and II. Ten competencies were included in this section pertinent to nutrition in community health nursing. One of these competencies--No. 2, "Support community action to influence legislation for consumer protection relevant to food manufacture and marketing practices"--was rejected for "both" or for either nursing program. This competency would more likely fall within the role of dietitians and nutritionists or home economists. Further, the information required for acquisition of this ability is seldom, if ever, included in the nursing curriculum. Of the other nine competency statements included in Section III,

six were favored for "both" over a single program but were more strongly preferred for baccalaureate programs versus associate degree programs. The other three remaining competencies, No. 1, No. 8, and No. 10, were not favored for both programs over a single program but were more strongly preferred for the baccalaureate nurse. Items No. 1, No. 8, and No. 10 are:

Section III:

Item No. 1--"Foster and establish the teaching of nutrition in schools as an integral part of health education"

No. 8--"Provide liaison between institution and the home for continuity of nutritional care"

No. 10--"Utilize knowledge of the behavioral and natural sciences in helping individuals and families to improve dietary practices"

The abilities to teach, coordinate, and use knowledge in natural and behavioral sciences are implicit in the competency statements above. These cognitive and clinical skills are generally, if not always, included at the baccalaureate level of nursing education. It might be expected, therefore, that respondents might single out these abilities for only baccalaureate nursing programs. Nine of the total of ten competencies in Section III were more strongly preferred for the baccalaureate program versus the associate degree level of preparation, when these programs were compared with each other.

Added Comments of Respondents (Appendix C)

Space was provided at the end of the survey instrument for respondents to make comments. Over fifty comments were submitted by the 130 respondents. Only those comments with relevance to the

objectives of this research study were compiled. Forty comments met this criterion, and these statements fell into four quite distinct categories. The four concept areas are:

1. The need for nutrition competence in nursing practice.
2. Time allocation for nutrition in nursing curricula.
3. Delineation of respective roles of nurses, dietitians, and nutritionists.
4. Nutrition competencies specific to levels of nursing education.

The direct quotes of respondents, categorized by concepts, appear in Appendix C.

These comments, almost without exception, reflect the same concerns which were inherent in the purpose of this research study. The issues verbalized in these "comments" reinforced the issues and concerns about nutrition in nursing education that were discussed in current publications. It is notable that these faculty comments demonstrated awareness of the problem being studied and the difficulties in resolving it. There was a similarity in comments received from faculty members of associate degree and baccalaureate programs. This observation tended to indicate that the faculty in both levels of nursing educat on share many common concerns about the nutrition component of nursing curricula.

Results of Tests for the Null Hypotheses

Null hypothesis no. 1

This hypothesis states: There is no significant difference in the competencies selected for the baccalaureate and the associate degree levels of nursing education. The data on Table 14 [Number of Competency Items Significantly Selected According to

Type of Program(s)] was used to test this hypothesis. The information tabulated and tested rejects this null hypothesis because of the following findings:

Section I: Thirteen of the thirty-two competencies were more strongly preferred for baccalaureate degree programs and none of these competencies were favored for associate degree programs, when these two programs were compared with each other.

Section II: Five of the fourteen competencies were more strongly preferred for baccalaureate programs and four of the competencies in this section were more strongly preferred for the associate degree programs, when these two programs were compared with each other.

Section III: Nine of the ten competencies were more strongly preferred for baccalaureate programs and none of the competencies in this section were favored for associate degree programs, when these programs were compared with each other.

When baccalaureate and associate degree programs were compared with each other, twenty-seven (48%) of the total of fifty-six competencies were more strongly preferred for baccalaureate programs and four competencies (7%) were more strongly preferred for associate degree programs. Added together, this represents differences for 55% of the total competencies. These findings show that there is a significant difference in competencies selected by this sample population for baccalaureate and associate degree programs.

Null hypothesis no. 2

The null hypothesis No. 2 states: There is no significant difference in the competencies selected by faculty teaching only in

associate degree programs and faculty teaching in all other programs, i.e. baccalaureate, master's, or more than one program. This hypothesis was tested by a regression analysis and the results are presented on Table 15.

TABLE 15

COMPARISON OF RESPONSES FROM FACULTY TEACHING ONLY IN ASSOCIATE DEGREE PROGRAMS AND FACULTY TEACHING IN ALL OTHER PROGRAMS

Section	r (Correlation Coefficient)	Level of Significance
I	+ .90	.001
II	+ .93	.001
III	+ .92	.001

Correlation between these two groups of faculty was highly significant. The high degree of correlation between responses of faculty teaching only in associate degree programs and all other faculty supports the null hypothesis No. 2. These data indicate no significant difference in the competencies selected by faculty members teaching in different levels of nursing education programs. Therefore, as a single variable, these data suggest that the type of program with which faculty members were associated did not significantly influence their selection of competencies in nutrition essential for nursing practice.

Null hypothesis no. 3

The null hypothesis No. 3 states: There is no significant difference in competencies selected by faculty members prepared at

the master's level and above and those faculty members prepared below the master's level. This hypothesis was tested using a regression analysis and the results are presented on Table 16.

TABLE 16

COMPARISON OF RESPONSES FROM FACULTY PREPARED AT AND ABOVE THE MASTER'S LEVEL AND FACULTY PREPARED BELOW THE MASTER'S LEVEL

Section	r (Correlation Coefficient)	Level of Significance
I	+ .89	.001
II	+ .96	.001
III	+ .81	.001

There was a significantly high level of correlation between responses from faculty members prepared at the master's level and above and faculty members prepared below the master's level. The high degree of correlation between the responses of these two faculty groups, as shown above, supports the null hypothesis No. 3. These data indicate no significant difference in competencies selected by faculty members holding different levels of academic degrees. Therefore, as a single variable, these data suggest that the level of preparation of faculty members did not significantly influence their selection of competencies in nutrition essential for comprehensive nursing practice.

Thus, the findings presented in Table 15 and Table 16 tend to support the view that neither the type of program in which faculty members taught or the level of the respondents' academic

preparation significantly affected the selection of competencies in the survey instrument of this research study. Attributes other than the two tested above might have influenced responses to items in the survey instrument. However, the two attributes for which tests of significance were conducted were considered most likely to influence the selection of competencies.

Summary of Findings

The objectives of this research study were:

1. To identify the competencies in nutrition that nursing educators consider essential for comprehensive nursing practice
2. To determine the level of nursing education (baccalaureate, associate degree, or "both" levels) to which nursing educators considered each competency is best suited

The findings and interpretation of the data and the discussion, herein presented, fulfilled these objectives. From the findings, it was possible to designate those nutrition competencies that nursing educators consider essential for nursing practice. Using statistical methods, the competencies were given a priority ranking within each section. The delineation of essential competencies and the priority ranking provide a consensual response of faculty members to objective No. 1, as stated above.

Additional analysis of the data provided the opinions of the nursing teachers about which competencies were best suited to the baccalaureate level, the associate degree level, or both levels of nursing education. This information is reported in two ways:

1. Competencies favored for "both" programs over either single program
2. Competencies more strongly preferred for the baccalaureate program or the associate degree program, when these programs were compared with each other

This information provides faculty members with a relatively broad choice of competencies from which they may decide the competencies to include in their respective curricula.

As a corollary, the interpretation of the data answered the two questions raised in this research as follows:

1. The level of academic preparation of faculty did not show any significant influence on the respondents in their selection of nutrition competencies essential for nursing practice. There was strong agreement in the responses on the survey instrument among faculty with differing levels of academic preparation. As a sirgle variable, the level of faculty preparation does not seem to affect the responses submitted by the participants.

2. The level of program (associate degree or baccalaureate) with which faculty members were associated did not show any significant influence on the respondents in their selection of nutrition competencies essential for nursing practice. There was strong agreement in the responses on the survey instrument among the faculty associated with the associate degree and the baccalaureate level of nursing education. As a single variable, the level of program with which faculty members are currently associated did not seem to affect the responses submitted by the participants.

The findings, interpretation, and discussion included in Chapter IV provided the basis for the conclusions and recommendations offered in Chapter V.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Conclusions from the Study

The review of literature undertaken for this research revealed that nutrition as a concept area in preparation for nursing practice was an accepted component of "nurses' training" and nursing education for over one hundred years. Between the 1850s and the 1970s, major changes have occurred which carry important implications for nutrition in nursing curricula. Some of these changes with relevance for this research were:

1. Preparation of nurses moved from the apprentice-type training to a formal program in higher education

2. Beginning with North Carolina in 1903 (Georgia in 1906), Nurse Practice Acts were passed by state legislatures which required graduates of nursing education programs to pass a legally authorized examination to become registered nurses

3. Dietetics began as a health discipline about 1905 and dietitians were given responsibilities for nutritional care of patients that were similar and ofttimes overlapping with tasks previously performed by nurses

4. During the twentieth century, nutrition became a discrete science, separate and apart from biochemistry and physiology from which it evolved

5. During the past decade, major changes in the delivery of health care have changed the focus of nutrition from a crisis-orientation, mainly in hospitals, to preventive health care and therapy in health care institutions and community health agencies as well as in industry and in the home

Commenting on the current status of nutrition in nursing education, Grant and McCarthy said, "Today nutrition education for students

of nursing is not a question of to be or not to be but of where, when and how it will be included in the curriculum."[1] The findings of this study provide information which should enable faculty to determine "where, when and how" nutrition might be included in nursing education for the two and four year academic levels of preparation.

The Secretary of H.E.W. (1967), Elliot L. Richardson, pointed out in the report on nursing transmitted to the President of the United States that because of their numbers and preparation nurses are a critical variable in any health care delivery system.[2] Sister Kramer insisted that basic to more effective teaching leading to better qualified practitioners there is the necessity for well stated objectives and a means for testing students' achievement of these objectives.[3] In commenting on the difficulties in developing and using objectives, Sister Kramer said:

> Common faults in the objectives include different levels of specificity or generality and overlapping within one set of objectives, lack of hierarchal relationship among objectives from one level to the next. . . . and the use of ambiguous words that can be variously interpreted.[4]

In her article, this author used objectives synonymously with competencies as defined in this research.

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[1]Faye W. Grant and Grace McCarthy, "Nutrition Subject Matter in the Nursing Curriculum," The Journal of the American Dietetic Association 58 (January 1971):26.

[2]Extending the Scope of Nursing Practice.

[3]Sister Mary Albert Kramer, "A Nursing Objectives Bank--Fantasy or Good Sense," Nursing Outlook 22 (November 1974):706-7.

[4]Ibid.

The data derived from this study provide a consensual opinion by nursing educators about the competencies that they consider essential for nursing practice. Among the faculty studied there was marked agreement about a significant number of nutrition competencies deemed essential in the preparation of nursing students for nursing practice. A high level of discrimination was exercised in selection of competencies favored for both levels and more strongly preferred for either associate degree or baccalaureate programs. Competencies which were more strongly preferred for baccalaureate or associate degree programs were identified. Over two-thirds of the competencies that might fall within the cognitive and psychomotor domains were considered essential to both levels of nursing programs over a single program. This finding would tend to indicate that the faculty surveyed are of the opinion that extensive nutrition education is essential for nursing students in preparation for the practice of nursing. When given the opportunity to show a preference in competencies for the baccalaureate programs or associate degree programs, approximately one-half of the competencies (twenty-seven out of a total of fifty-six) were more strongly preferred for the higher level of nursing education. This selection seems reasonable inasmuch as the additional two years in the baccalaureate program, the larger numbers of faculty with specialized expertise, and the wider range of clinical experiences included in four year nursing education create a situation conducive to development of a greater number and more complex nutrition competencies.

Competencies included in curricula should be compatible with a program's philosophy, conceptual framework, time allocation, and available faculty expertise. The results of this study provide a frame of reference which can assist faculty to select the competencies in nutrition appropriate to their respective curricula. There are several options for how faculty can use this data. It might be that a certain number of those competencies with higher ranking in each of the sections would be decided upon for some curricula. Other faculty may consider it suitable to include in their curriculum only those competencies that were more strongly preferred for a particular level of nursing education, i.e. associate degree or baccalaureate. Faculty in some programs may choose to implement all the competencies in this research favored for both programs over a single program because they may deem these competencies basic to comprehensive nursing practice regardless of the level of nursing education. Such a course of action may be justified in that when a nursing student graduates and becomes a registered nurse the competencies expected in nursing practice in various work settings may be, in fact, the same for graduates holding different levels of preparation. This situation is most often true in hospitals in which the majority of active registered nurses continue to be employed. The reality of the lack of differentiation in diverse employment areas of registered nurses according to levels of nursing education and degree of competence is a current dilemma in nursing practice and one which faculty must face. Other means of using this data in curriculum development may be devised by participating faculties.

Responsibility for using the information and data resulting from this study is within the province of faculty associated with the participating nursing education programs. Once faculty members have decided upon those competencies that they plan to implement in their respective curricula, it is then necessary that they create the learning climate; provide meaningful theoretical and clinical learning experiences; facilitate the learning process; and, finally, evaluate students to determine if, in fact, students have achieved the specific competencies. When a competency has been attained, students should be able to demonstrate a synthesis of the attitudes, knowledge, and skills inherent in the competency.

This research study provides nursing faculty with competencies in nutrition that can be applied in primary, acute, and long-term health care. Nurses with strong nutrition competence can measurably influence the health status of people of all ages from all socioeconomic strata. Improved health status resulting from improved nutritional practices may help to alleviate many prevalent and serious health problems that take an incalculable toll in economic resources, human potential, and human life. Well prepared nurses armed with the essential nutrition competencies identified in this study could help to resolve the many health problems that have plagued mankind from time immemorial.

Recommendations for Further Research

The findings of this study suggest other areas of purposeful investigation that might be pursued, such as:

1. Would faculty of hospital-based diploma programs select competencies similar to or different from the findings of this study? Diploma nursing programs continue to graduate hundreds

of nursing students each year in Georgia and throughout the United States. Over the country, the number of graduates of hospital-based diploma programs is in the thousands. It would be informative to ascertain whether faculty in these hospital-based programs perceive the nutrition competencies essential for comprehensive nursing practice in the same way or other than the sample population (two and four year college faculty) of this study.

2. Would faculty in nursing programs in private colleges and universities in Georgia select nutrition competencies similar to or different from the findings of this study? The findings of a survey of faculty in private institutions could be compared with the findings of this research in an attempt to gain additional insights on the subject (problem) of nutrition competencies in nursing education.

3. Nursing programs similar to those described in number 1 and number 2 above and a group of programs similar to those included in this research located in states other than Georgia could be surveyed to determine if the findings of this Georgia study can be inferred to nursing education programs in other states.

4. Practicing nurses and nursing leaders responsible for the quality of patient care might be surveyed to gain their perception of nutrition competencies essential for comprehensive nursing practice. It would be interesting and informative to learn whether practicing nurses and nursing leaders respond in the same way or differently than nurse educators. These findings might help to answer two profound questions: (1) Are students being prepared realistically relevant to nutrition competence as an integral part of nursing practice for the expectations of nursing practice in the delivery of health care, now and in the future; and (2) Does a gap exist between nursing educators and practicing nurses in respect to the problem being studied?

The findings of the studies, as recommended above, may support the findings of this research. Future studies might provide information to indicate whether the results of this study can be universally applied to the nutrition component of nursing education curricula elsewhere. In this way, nutrition as an integral part of nursing education and nursing practice might be strengthened and, in turn, this improvement may contribute to an amelioration of many of the nation's serious health problems.

APPENDIXES

APPENDIX A

APPENDIX A

NUTRITION-NURSING EDUCATION PROJECT - NIH D10-NU-00304
School of Nursing, Atlanta Center
Medical College of Georgia
126 West Trinity Place, Room 101
Decatur, Georgia 30030

February 26, 1973

Dear Colleague:

Together, we are entering the fifth year of the project "The Integration of Nutrition Education into the Nursing Curriculum". As you will recall, the approved program plan included "questions to be posed and problems to be probed". The purpose of this letter and the attached materials is to ask your assistance in probing a very gnawing problem relevant to nutrition in nursing education. This question is: "What competencies in nutrition are essential for comprehensive nursing practice?"

Attached is a Survey through which faculty can select those nutritional competencies that they consider essential for nursing practice. Compilation of the findings from the responses of approximately two-hundred faculty will be shared with you. Hopefully, this study will provide a sound basis for articulating behavioral objectives as well as selecting content and learning experiences that will achieve expected outcomes. This study is intended to lend integrity to nursing curricula that include normal and therapeutic nutrition throughout students' programs.

I look forward to receiving your completed Survey by April 1, 1973. As always, our staff is grateful for your continuing cooperation in our mutual goal of a sound nutrition component of nursing education curricula.

Sincerely,

Rebecca C. Trooboff

(Mrs.) Rebecca C. Trooboff
Associate Professor and Director
Nutrition-Nursing Education Project

RCT/stb

Enclosures

APPENDIX A--Continued

DATA SHEET FOR RESPONDENTS

Please fill in or check the correct response.

Information about you:

ACADEMIC PREPARATION
(Check all that apply)

A.D. ____
Diploma ____
B.S.N. ____
M.N. ____
Doctorate ____
Other (list) _____

_____

Institution of Highest Degree is:

_____
(Name of College or University)

_____
(Location)

YEARS OF TEACHING EXPERIENCE

1 - 5 years ____
5 - 10 years ____
Over 10 years ____

YEARS OF NURSING PRACTICE

None ____
Up to 5 years ____
5 - 10 years ____
Over 10 years ____

AGE

Under 30 ____
30 - 50 ____
Over 50 ____

SEX

Female ____
Male ____

AREA OF CLINICAL CONCENTRATION
(or major)

Medical-Surgical ____
Maternal & Child ____
Pediatric ____
Psychiatric ____
Public Health ____
Rehabilitation ____
Other ____

Information about Program in Which You Teach:

NUMBER OF STUDENTS

____ First year
____ Second year
____ Third year
____ Fourth year
____ Master s

This program was established in _____.
(year)

This program is: A.D. ____
B.S. ____
M.S.N. ____
Other ____

Required course in nutrition. Yes ____
No ____

If "Yes", quarter hours: 3 ____
5 ____

Date _____

_____
(Signature - optional)

APPENDIX A--Continued

INSTRUCTIONS FOR COMPLETION OF THE SURVEY

After carefully reading the covering letter:

1. Consider one section at a time. Respond to each item within each section individually as it relates to the title of the area (listed at the top of the page).

2. For each item, put a check in the column (strongly agree, agree, etc.) which best represents your opinion on that item.

   Under "strongly agree" and "agree" columns you are requested to check the level of preparation (A.D., B.S.N.) at which you believe this specific competency should be acquired. If you believe this competency is relevant at both levels, please check both columns.

3. Before completion of the Survey, please be sure that you have placed a check mark for every item.

Please mail completed Survey to:

Mrs. Rebecca C. Trooboff
Nutrition-Nursing Education Project
126 West Trinity Place
Decatur, Georgia 30030

Attached is a stamped, self-addressed envelope for your convenience.

SECTION I - Nutrition in Health Maintenance or Restoration

In providing nursing care for health maintenance or restoration, in institutions or in the community, the nurse should be able to:

	Strongly Agree		Agree		Uncertain	Disagree	Strongly Disagree
	A.D.	B.S.N.	A.D.	B.S.N.			
1. Explain what is meant by a 'balanced diet' for persons of any chronological age.							
2. Record by the interview method current food intake and dietary practices.							
3. Teach people how to improve nutritional status based on her knowledge of vital functions of nutrients.							
4. Compare nutritional value of foods produced by differing methods of agriculture, manufacture, cooking and storage.							
5. Use food composition tables to ascertain nutrient content of specific foods and meals.							
6. Provide nutritional guidance that encompasses socio-economic and cultural factors as determinants of nutritional well being and food preferences.							
7. Assess nutritional status using clinical observations, biochemical values, and Recommended Dietary Allowances as the frame of reference.							
8. Give instructions about food purchasing, menu planning and food preparation that are beneficial to health.							

APPENDIX A-Continued

SECTION I - Nutrition in Health Maintenance or Restoration (continued)

	Strongly Agree		Agree		Uncertain	Disagree	Strongly Disagree
	A.D.	B.S.N.	A.D.	B.S.N.			
9. Select and utilize accurate current audio-visual materials for teaching normal nutrition to individuals and groups.							
10. Recognize symptoms of malnutrition and initiate remedial action.							
11. Prepare dietary plans for pregnant women that promote maternal and infant health.							
12. Compare and evaluate breast and bottle feeding.							
13. Teach formula preparation using aseptic, terminal, and single bottle methods.							
14. Guide parents in the additions of solid foods to a baby's diet during the first year.							
15. Detect food misinformation and quackery and take action to reduce these problems.							
16. Describe government food assistance programs and arrange for participation of eligibles.							
17. Demonstrate awareness of the unique social, emotional, and physical factors that influence food habits and nutritional status during adolescence.							
18. Recognize nutritional problems associated with aging and take measures to assist the elderly to cope with these concerns.							

APPENDIX A - Continued

SECTION I - Nutrition in Health Maintenance or Restoration (continued)

	Strongly Agree		Agree		Uncertain	Disagree	Strongly Disagree
	A.D.	B.S.N.	A.D.	B.S.N.			
19. Explain the scientific principles underlying patients' modified diets.							
20. Describe, using food examples, diet changes required in conditions such as cardiovascular disease, diabetes, weight control.							
21. Teach the Exchange Lists to patients.							
22. Use audio-visual aids to reinforce patient teaching.							
23. Provide diet instruction compatible with the physician's diet prescription.							
24. Interpret the dietary plan to parents of a child with P.K.U. or other inborn errors of metabolism.							
25. Determine the most appropriate communication and teaching skills in instructing individuals and families to cope with therapeutic diets.							
26. Describe the effect of excessive alcohol on nutritional needs and well being.							
27. Have sufficient knowledge of the natural and behavioral sciences in order to care for the severely burned patient, e.g. effects of stress.							
28. React constructively to social and psychological problems that arise because of dietary restriction, e.g. diabetes in adolescence.							

SECTION I - Nutrition in Health Maintenance or Restoration (continued)

	Strongly Agree		Agree		Uncertain	Disagree	Strongly Disagree
	A.D.	B.S.N.	A.D.	B.S.N.			
29. Calculate a prescribed diet, e.g. C150 P80 F90, and work out an accurate menu plan which is acceptabe to the patient.							
30. Demonstrate awareness of current knowledge and practices in therapeutic nutrition.							
31. Recommend community resources that assist individuals on modified diets, e.g. Diabetic Youth Camp, Colostomy Club.							
32. Instruct patients regarding the special diets used in diagnostic procedures, e.g. fat free meal, limited calcium regimes, etc.							

Added competencies or comments:

SECTION II - Nutritional Care in Health Care Institutions

In addition to the competencies in Section I, the nurse, in health care institutions, should be able to:

	Strongly Agree		Agree		Uncertain	Disagree	Strongly Disagree
	A.D.	B.S.N.	A.D.	B.S.N.			
1. Incorporate patients' individual nutritional needs as an integral part of therapy.							
2. Explain standard hospital diets to patients, e.g. full liquid, soft, etc.							
3. Critically evaluate patients' trays for accuracy and acceptability.							
4. Observe and record patients' actual dietary intake.							
5. Coordinate the health team's activities in meeting dietary needs of patients.							
6. Seek out opportunities to teach normal and therapeutic nutrition to patients and families.							
7. Help a patient to understand changes necessitated by therapeutic diet and to adopt a sound attitude towards these changes.							
8. Develop and monitor a plan for maintaining fluid and electrolyte balance.							
9. Render nutritional care at the bedside, i.e. premeal care, meal time assistance and post-meal care.							

SECTION II - Nutritional Care in Health Care Institutions (continued)

	Strongly Agree		Agree		Uncertain	Disagree	Strongly Disagree
	A.D.	B.S.N.	A.D.	B.S.N.			
10. Facilitate the feeding of patients who are unable to eat independently.							
11. Instruct and supervise other personnel in meeting nutritional needs of individual patients.							
12. Coordinate functional departments in order to carry out the physician's nutrition (normal or therapeutic) prescription.							
13. Establish procedures to control food-borne communicable diseases.							
14. Under disaster conditions, utilize the available dietary facilities to feed the surrounding community.							

Added competencies or comments.

SECTION III - Nutrition in Community Health

In addition to the competencies in Section I, the nurse as a professional health worker in the community should be able to.

	Strongly Agree		Agree		Uncertain	Disagree	Strongly Disagree
	A.D.	B.S.N.	A.D.	B.S.N.			
1. Foster and establish the teaching of nutrition in schools as an integral part of health education.							
2. Support community action to influence legislation for consumer protection relevant to food manufacture and marketing practices.							
3. Use current scientific knowledge in answering questions about "health foods".							
4. Recognize and lend dignity to "alternate life styles" having dramatically different dietary practices.							
5. Explain the proper use of food supplements, e.g. vitamins, minerals.							
6. Teach homemakers methods of food handling that minimize food contamination and prevent food poisoning.							
7. Recognize and assist "high risk" nutritionally vulnerable individuals and families.							
8. Provide liaison between institutions and the home for continuity of nutritional care.							

APPENDIX A--Continued

SECTION III - Nutrition in Community Health (continued)

	Strongly Agree		Agree		Uncertain	Disagree	Strongly Disagree
	A.D.	B.S.N.	A.D.	B.S.N.			
9. Recognize and provide assistance in cases of specific nutritional anomalies, e.g. diabetes, deficiency diseases.							
10. Utilize knowledge of behavioral and natural sciences in helping individuals and families to improve dietary practices.							

Added competencies or comments:

APPENDIX B

APPENDIX B

NUTRITION-NURSING EDUCATION PROJECT - NIH D10-NU-00304
School of Nursing, Atlanta Center
Medical College of Georgia
126 West Trinity Place, Room 101
Decatur, Georgia 30030

February 26, 1973

Dear Colleague:

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I look forward to receiving your completed Survey by April 1, 1973. As always, our staff is grateful for your continuing cooperation in our mutual goal of a sound nutrition component of nursing education curricula.

Sincerely,

Rebecca C. Trooboff

(Mrs.) Rebecca C. Trooboff
Associate Professor and Director
Nutrition-Nursing Education Project

RCT/stb

Enclosures

APPENDIX B--Continued

DATA SHEET FOR RESPONDENTS

Please fill in or check the correct response.

Information about you:

ACADEMIC PREPARATION
(Check all that apply)

A.D. ____
Diploma ____
B.S.N. ____
M.N. ____
Doctorate ____
Other (list) _____

_____

Institution of Highest Degree is:

_____
(Name of College or University)

_____
(Location)

YEARS OF TEACHING EXPERIENCE

1 - 5 years ____
5 - 10 years ____
Over 10 years ____

YEARS OF NURSING PRACTICE

None ____
Up to 5 years ____
5 - 10 years ____
Over 10 years ____

AGE

Under 30 ____
30 - 50 ____
Over 50 ____

SEX

Female ____
Male ____

AREA OF CLINICAL CONCENTRATION
(or major)

Medical-Surgical ____
Maternal & Child ____
Pediatric ____
Psychiatric ____
Public Health ____
Rehabilitation ____
Other ____

Information about Program in Which You Teach:

NUMBER OF STUDENTS

____ First year
____ Second year
____ Third year
____ Fourth year
____ Master's

This program was established in _____.
(year)

This program is: A.D. ____
B.S. ____
M.S.N. ____
Other ____

Required course in nutrition: Yes ____
No ____

If "Yes", quarter hours: 3 ____
5 ____

Date _____

_____
(Signature - optional)

APPENDIX B--Continued

INSTRUCTIONS FOR COMPLETION OF THE SURVEY

After carefully reading the covering letter:

1. Consider one section at a time. Respond to each item within each section individually as it relates to the title of the area (listed at the top of the page).

2. For each item, put a check in the column (strongly agree, agree, etc.) which best represents your opinion on that item.

   Under "strongly agree" and "agree" columns you are requested to check the level of preparation (A.D., B.S.N.) at which you believe this specific competency should be acquired. If you believe this competency is relevant at both levels, please check both columns.

3. Before completion of the Survey, please be sure that you have placed a check mark for every item.

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	Strongly Agree		Agree		Uncertain	Disagree	Strongly Disagree
	A.D.	B.S.N.	A.D.	B.S.N.			
1. Provide nutritional guidance that encompasses socio-economic and cultural factors as determinants of nutritional well being and food preference.							
2. Assess nutritional status using clinical observations, biochemical values, and Recommended Dietary Allowances as the frame of reference.							
3. Give instructions about food purchasing, menu planning and food preparation that are beneficial to health.							
4. Select and utilize accurate, current audio-visual materials for teaching normal nutrition to individuals and groups.							
5. Recognize symptoms of malnutrition and initiate remedial action.							
6. Explain what is meant by a "balanced diet for persons of any chronological age.							
7. Record by the interview method current food intake and dietary practices.							
8. Teach people how to improve nutritional status based on her knowledge of vital functions of nutrients.							

APPENDIX B--Continued

SECTION I - Nutrition in Health Maintenance or Restoration (continued)

	Strongly Agree		Agree		Uncertain	Disagree	Strongly Disagree
	A.D.	B.S.N.	A.D.	B.S.N.			
9. Compare nutritional value of foods produced by differing methods of agriculture, manufacture, cooking and storage.							
10. Use food composition tables to ascertain nutrient content of specific foods and meals.							
11. Teach formula preparation using aseptic, terminal, and single bottle methods.							
12. Guide parents in the additions of solid foods to a baby's diet during the first year.							
13. Prepare dietary plans for pregnant women that promote maternal and infant health.							
14. Compare and evaluate breast and bottle feeding.							
15. Demonstrate awareness of the unique social, emotional, and physical factors that influence food habits and nutritional status during adolescence.							
16. Recognize nutritional problems associated with aging and take measures to assist the elderly to cope with these concerns.							
17. Detect food misinformation and quackery and take action to reduce these problems.							
18. Describe government food assistance programs and arrange for participation of eligibles.							

SECTION I - Nutrition in Health Maintenance or Restoration (continued)

	Strongly Agree		Agree		Uncertain	Disagree	Strongly Disagree
	A.D.	B.S.N.	A.D.	B.S.N.			
19. Have sufficient knowledge of the natural and behavioral sciences in order to care for the severely burned patient, e.g. effects of stress.							
20. React constructively to social and psychological problems that arise because of dietary restriction, e.g. diabetes in adolescence.							
21. Calculate a prescribed diet, e.g. C150 P80 F90, and work out an accurate menu plan which is acceptable to the patient.							
22. Demonstrate awareness of current knowledge and practices in therapeutic nutrition.							
23. Recommend community resources that assist individuals on modified diets, e.g. Diabetic Youth Camp, Colostomy Club.							
24. Instruct patients regarding the special diets used in diagnostic procedures, e.g. fat free meal, limited calcium regimes, etc.							
25. Explain the scientific principles underlying patients' modified diets.							
26. Describe, using food examples, diet changes required in conditions such as cardiovascular disease, diabetes, weight control.							
27. Teach the Exchange Lists to patients.							
28. Use audio-visual aids to reinforce patient teaching.							

SECTION I - Nutrition in Health Maintenance or Restoration (continued)

	Strongly Agree		Agree		Uncertain	Disagree	Strongly Disagree
	A.D.	B.S.N.	A.D.	B.S.N.			
29. Provide diet instruction compatible with the physician's diet prescription.							
30. Interpret the dietary plan to parents of a child with P.K.U. or other inborn errors of metabolism.							
31. Determine the most appropriate communication and teaching skills in instructing individuals and families to cope with therapeutic diets.							
32. Describe the effect of excessive alcohol on nutritional needs and well being.							

Added competencies or comments:

SECTION II - Nutritional Care in Health Care Institutions

In addition to the competencies in Section I, the nurse, in health care institutions, should be able to:

	Strongly Agree		Agree		Uncertain	Disagree	Strongly Disagree
	A.D.	B.S.N.	A.D.	B.S.N.			
1. Observe and record patients' actual dietary intake.							
2. Coordinate the health team's activities in meeting dietary needs of patients.							
3. Seek out opportunities to teach normal and therapeutic nutrition to patients and families.							
4. Incorporate patients' individual nutritional needs as an integral part of therapy.							
5. Explain standard hospital diets to patients, e.g. full liquid, soft, etc.							
6. Critically evaluate patients' trays for accuracy and acceptability.							
7. Facilitate the feeding of patients who are unable to eat independently.							
8. Instruct and supervise other personnel in meeting nutritional needs of individual patients.							
9. Coordinate functional departments in order to carry out the physician's nutrition (normal or therapeutic) prescription.							
10. Help a patient to understand changes necessitated by therapeutic diet and to adopt a sound attitude toward these changes.							

SECTION II - Nutritional Care in Health Care Institutions (continued)

	Strongly Agree		Agree		Uncertain	Disagree	Strongly Disagree
	A.D.	B.S.N.	A.D.	B.S.N.			
11. Develop and monitor a plan for maintaining fluid and electrolyte balance.							
12. Render nutritional care at the bedside, i.e. premeal care, meal time assistance and post-meal care.							
13. Under disaster conditions, utilize the available dietary facilities to feed the surrounding community.							

Added competencies or comments:

132

SECTION III - Nutrition in Community Health

In addition to the competencies in Section I, the nurse as a professional health worker in the community should be able to

	Strongly Agree		Agree		Uncertain	Disagree	Strongly Disagree
	A.D.	B.S.N.	A.D.	B.S.N.			
1. Use current scientific knowledge in answering questions about 'health foods'.							
2. Recognize and lend dignity to alternate life styles having dramatically different dietary practices.							
3. Foster and establish the teaching of nutrition in schools as an integral part of health education.							
4. Support community action to influence legislation for consumer protection relevant to food manufacture and marketing practices.							
5. Recognize and assist "high risk" nutritionally vulnerable individuals and families.							
6. Provide liaison between institutions and the home for continuity of nutritional care.							
7. Explain the proper use of food supplements, e.g. vitamins, minerals.							
8. Teach homemakers methods of food handling that minimize food contamination and prevent food poisoning.							

SECTION III - Nutrition in Community Health (continued)

	Strongly Agree		Agree		Uncertain	Disagree	Strongly Disagree
	A.D.	B.S.N.	A.D.	B.S.N.			
9. Utilize knowledge of behavioral and natural sciences in helping individuals and families to improve dietary practices.							
10. Recognize and provide assistance in cases of specific nutritional anomalies, e.g. diabetes, deficiency diseases.							

Added competencies or comments:

APPENDIX C

APPENDIX C

RESPONDENTS' COMMENTS CATEGORIZED BY CONCEPTS

I. The Need for a Nutrition Competence in Nursing Practice

"This applies to all sections. I have been out of practice for several years. I returned in September, 1972 on part time basis. I am not yet familiar with all the changes in trends. So I do not feel this survey data is adequately answered or acquired knowledge of what is being taught in nursing schools today but only on what I assume nurses should know."

"Your questionnaire is loaded with ideas that are great and ideal and I really think nurses need much of this information but it needs to be selected for their particular interest beyond a standard base. I by no means believe that everything checked on this questionnaire can be taught without causing an imbalance in the nursing educational program."

"I found that while working with students grades 1-12 that many knew little of the basic nutritional needs. The teachers as well as others in the community look to the nurses for their dietary information; therefore, I believe nutritional education for nurses is of prime importance."

"Have strong feelings about expectations for nurses in providing (imparting) nutrition knowledge or information to patients and community. I question how depth of subject can be appreciated and absorbed by students who do not have at least a basic nutrition course as a requirement. I feel students need a basic understanding of normal nutritional requirements with opportunity for absorption. Then there should be provision for application of these principles for deviating conditions. Note my strongly agree comments expect more from B.S. than A.D. student, an assumption more in-depth knowledge offered B.S. students."

II. Time Allocation for Nutrition in Nursing Curricula

"In the curriculum plans in most schools of nursing, especially A.D., time is a factor. Incorporating principles of good nutrition and bringing in restrictions of diet with certain diseases is about all you can do. I personally believe a nurse should know basic principles of good nutrition

APPENDIX C--Continued

and know (have a knowledge of) principles in diet restriction and be able to select a menu. But a nurse cannot be all things to all people. She cannot be a nutritionist any more than she can be a doctor. Therefore, she is limited in what she can do and the nutritionist should assume the full responsibility of teaching the patient about diet and selecting and preparing special foods." (Last part also Category III.)

"Many of the areas of A.D. uncertainty are related to how much teaching time is allocated to nutrition and diet therapy. I feel perhaps these areas might be covered in a separate nutrition course if offered. However, if time is limited perhaps these areas of content should be covered in the B.S.N. programs."

III. Delineation of the Respective Roles of Nurses, Dietitians, and Nutritionists

"Some of these competencies are not essential when a nutritionist or dietitian is a member of the health team, but the nurse should know where to obtain the information should a nutritionist not be available."

"Some of these seem to be the responsibility of the Dietary Department."

"If nurses are expected to do all this, why have nutritionists? Nurses are expected to do so many things today that I believe the Dietary Department could assume much more responsibility for their own field material. We do not teach students in an A.D. program many aspects of community health at this time. Besides if nurses are expected to do all of these functions in relation to nutrition and nutritional instruction, I cannot see then the need for an additional professional person such as a nutritionist."

"These choices were made on the assumption that the A.D.N. would be working with the B.S.N. My personal belief is that the A.D.N. should be able to recognize a nutritional problem and know where to seek assistance. I also strongly believe that every health institution should retain an A.D.A. member. These are the specialists. A nurse cannot be all to every problem arising." (Also Category IV.)

"I believe the nurse should have the above competencies but that her teaching, etc. should compliment those of a nutritionist rather than be her responsibility alone."

APPENDIX C--Continued

"If there is a nutritionist available; otherwise it would be nursing function." (Several more notations on competencies that it is nutritionist's role rather than nurse's.)

"The nurse is a liaison between families and professionals. Meet the family where they are and help them meet their needs. Treat them with respect whether or not agree with life style."

"Although I checked many columns with agree or strongly agree, I feel that nurses really have too much to do already. Actually a qualified nutritionist should be available and used for most of these needs. Nurses do have the responsibility for referring patients to a specialist in nutrition. What about the nursing assistant? Some of the above responsibilities the RN must delegate."

"On certain items, and these are asterisked, I have made the stipulation that these competencies are performed only with a physician's order or are not performed because I feel it is out of the nurse's realm of independent responsibility."

"Is this really a nursing function? This is a dietitian's function. I personally believe a nurse should know basic principles of good nutrition and know (have a knowledge of) principles in diet restriction and be able to select a menu. But a nurse cannot be all things to all people. She cannot be a nutritionist any more than she can be a doctor. Therefore, she is limited in what she can do and the nutritionist should assume the full responsibility for teaching the patient about diet and selecting and preparing special foods."

"I feel the dietitian should do these things."

"We try to get our students (Prospective graduates) to seek help from a resource person when in doubt and as an adjunct to their teaching! Especially bringing in the family as a part of the 'team.' We try to get the student to give the patient and family a list of foods that can be used rather than the negative approach!"

"Some of the items I would disagree with if a registered dietitian were available. She could do a much better job."

"The articles that I checked as uncertain I feel are for dietitians but I feel that any student educated at the B.S.N. level would be able to find the knowledge and relay it to the patients. I feel that #11 is the physician's responsibility The nurse should be aware of foods that she can encourage the patient to eat that contain the proper fluids and

APPENDIX C--Continued

electrolyte. Gross abnormalities are usually treated by medication both orally and parenterally."

"I am uncertain as to some of the items because they overlap with what a qualified nutritionist might and could do much better. If a nutritionist was available, I would refer many of these things to her. In many instances, the social worker might also be more effective than the nurse, i.e. arrange for participation of eligibles in a food assistance program. As in Section I, I am uncertain as to some of the items because, in many cases, a nutritionist or a social worker would be more effective than a nurse. In my opinion, the nurse may act as a liaison between patient, nutritionist, etc. In many cases, she would be more effective and accurate as a liaison rather than actually doing many of the listed items."

"If you think of the nurse as responsible for teaching the patient (and family) what he needs to know about nutrition for his own recovery and health maintenance as a constant in her role, this item would imply something beyond that. If you don't consider this a part of her role, then I'd check the agree column for both."

"In many of these instances the nurse should utilize dietitians and then interpret to the patient and reinforce."

"If food service is not responsible for this it would be imperative (evaluate trays)."

"Only if no dietary personnel competent to do so (evaluate trays)."

IV. Nutritional Competencies Specific to the Level of Academic Preparation, i.e. A.D., B.S.N.

"I do not feel A.D. graduates have the educational background in areas besides nutrition to be public health nurses."

"I feel the A.D. graduate is not adequately prepared to participate in community nursing such as public health nursing. Although in the South many are taking part and working in the field and in so doing will need to have adequate knowledge in the field."

"I feel any graduate nurse should have a beginning knowledge in those areas checked as agree or strongly agree. If the nurse is in the role of school nurse or PHN I would agree with #1. I question the use of words like 'recognize symptoms and initiate measures.' This seems to be diagnosing and treating."

APPENDIX C--Continued

"These choices were made on the assumption the A.D.N. would be working with the B.S.N. My personal belief is that the A.D.N. should be able to recognize a nutritional problem and know where to seek assistance. I also strongly believe that every health institution should retain an A.D.A. member. These are the specialists. A nurse cannot be all to every problem arising."

"Formula preparation is outdated."

"In many instances the A.D. graduate must do things, like supervision, in which her basic preparation is not adequate (it is not intended to be). By necessity, however, graduates must assume the role of team leader, supervisor, etc."

"The level at which these things are done or not done by B.S. or A.D. students is more pertinent in many instances since both groups might carry out the function but at different levels. Also, if ward managers are available some coordinating duties would be assigned to them rather than the nurse."

"B.S.N. graduate would not need to perform this activity (feeding of patients) but should be able to direct others in so doing."

"This would involve committee activities of which the B.S.N. graduate could be a participant member (controlling food-borne communicable diseases). A.D. and B.S.N. graduates could be involved under supervision (disaster conditions)."

"My answers on the entire questionnaire probably reflect the fact that our graduates will probably function in situations where no B.S.N. is available."

"I believe the statement (use current scientific knowledge in answering questions about 'health foods') but am unsure of the A.D.'s part in it--since P.H.N. This can be a part of teaching but carrying through is another thing (foster and establish teaching of nutrition in schools)."

"I feel that Section III can be best carried out by the nurse educated at the B.S.N. level."

"Only those who have courses in public health could do this (describe government food assistance programs). A.D. will most likely not be able to do this (determine communication and teaching skills in instructing patients and families). A.D. not supposedly taught to initially be a coordinator."

"This (detect food misinformation) implies leadership which is <u>sometimes</u> a quality of graduates of both programs, but not

APPENDIX C--Continued

always. The nurse can monitor a plan for maintaining fluds and electrolyte balance or she can interpret a prescription and develop a plan to carry out the prescription taking into consideration patient comfort, physiological rest, circulatory capabilities, etc. The prescription would need to come first, however. It would seem more important to safeguard the fitness of the food served under disaster conditions rather than to be able to use the available dietary facilities. Just about anyone can do that."

"A.D., R.N. should recognize symptoms but not necessarily initiate treatment. I feel that the R.N. regardless of being from A.D. or B.S. program should have most of the listed competencies. However, I do not feel that it is necessary for her to personally render the services but rather to be certain that such care is given the patient by other nursing personnel. I feel that the A.D. graduate should have essentially the same competencies in nutrition as the B.S. graduate."

APPENDIX D

APPENDIX D

MCG

Medical College of Georgia
Augusta, Georgia 30902

School of Nursing
Atlanta Center
126 West Trinity Place
Decatur, Georgia 30030

March 19, 1973

Dear

Early in March, a survey form--"Competencies in Nutrition Essential for Nursing Practice"--was sent to all faculty. It was projected that compilation of the data from this survey would begin shortly after April 1.

I would appreciate it if you would remind faculty of this form and encourage their cooperation in completing and returning it. As high a return rate as possible is necessary in order for the findings to best reflect the overall opinions of faculties in programs participating in this study.

Thank you for your assistance.

Sincerely,

(Mrs.) Rebecca C. Trooboff
Associate Professor and Director
Nutrition-Nursing Education Project

RCT/stb

MCG

Medical College of Georgia
Augusta, Georgia 30902

School of Nursing
Atlanta Center
126 West Trinity Place
Decatur, Georgia 30030

March 23, 1973

Dear Colleague,

Early in March, you should have received a survey form -- "Competencies in Nutrition Essential for Nursing Practice". To date, your response has not reached this office.

It is important to have as high a return rate as possible for this study to best achieve its objective. Won't you please take time to complete and return this form? Your cooperation will be sincerely appreciated.

If by any chance you did not get the form, please drop us a note and we'll send you another.

Thank you for your cooperation.

Cordially,

Rebecca C. Trooboff

(Mrs.) Rebecca C. Trooboff
Associate Professor and Director
Nutrition-Nursing Education Project

RCT/stb

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